

INDIANA UNIVERSITY

Bloomington Community Impact Analysis of the General Electric Plant Closing

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EXECUTIVE SUMMARY

The SPEA V600 Capstone class undertook an assessment of the economic and fiscal impacts of the General Electric (GE) plant closure and layoffs relative to the human and social needs of the community. From there, we created a set of recommendations for local policy-makers to best improve the prospects of GE employees and mitigate the detrimental impact to local services. At each stage, we sought to enhance the role of the community.

ECONOMIC IMPACT

LOCAL EMPLOYMENT

The GE plant closure will eventually lay off the remaining 896 employees with a weighted average salary per employee of \$50,900. The impact will be spread between Monroe, Lawrence, Greene, Owen, and Morgan counties. Furthermore, 66% of the employees are eligible for retirement and some employees will become preferential hires and transfer. Since they receive wages higher than the average wage, those re-entering the workforce will likely have a sizeable pay reduction of between 50 and 70%.

Preferential placement will have a large impact on the local and state economy. Based upon an estimated 200 GE employee transfers, there will be an annual loss of \$10,180,000 in wages for the five county region. The closure will also increase resource demands on local workforce development organizations such as WorkOne.

PRIVATE SECTOR

The Bloomington economy has historically been dependent upon manufacturing, but the industry is declining. Monroe County now has a competitive advantage in the life sciences, administrative, waste services, and educational services industries.

The fiscal and employment impacts of the GE closure are relatively minor when viewed as a proportion of the total output and employment of the area. Even in our most conservative estimate, the impacts of the GE closure as a proportion of the overall economy are a loss of less than 5% of total output and less than 1% of total employment.

PUBLIC SECTOR

GE's payment to the City of Bloomington in lieu of annexation will remain constant until 2012, even with the plant closure, and if GE sells their property before the agreement is complete. The closure will not directly impact the City's revenue or expenditures.

For the County, the revenue impact will be insignificant for the County option income tax, real property tax and debt service to the Westside TIF. The plant closure will cause a dramatic change in personal property tax revenue, with two possible scenarios. First, the lost revenue will only impact Monroe

County and its subsidiaries, excluding the TIF district. In scenario two, the lost revenue will only affect the TIF district by reducing GE's contribution to debt service and the district's overall revenue. It is likewise possible that a combination of the two scenarios will occur.

NEEDS ASSESSMENT

SOCIAL SERVICES

Displaced workers will need avenues through which to seek out proactive solutions to individual difficulties. Personal financial planning is one of the top concerns facing GE employees as many may not fully understand their post-employment financial situation. Financial guidance is needed to help GE employees deal with health care costs, retirement, and construction of and adherence to a new budget. Further, newly unemployed workers often display psychological and emotional difficulties, which will increase demand for counseling services. As there is often little recognition of these needs, there is also a need to encourage the use of these services. Finally, the closing will disrupt the normal social networks in which employees commonly interact.

WORKFORCE AND HUMAN CAPITAL

Many employees lack a high school education or GED equivalent degree. To be competitive in emerging local industries, GE workers will need to receive basic skills training or pursue higher education along with industry specific skills development. Competency-based training, like the already available Life Sciences Certificate and HIRE Certificate, will ensure that workforce supply meets the demand of area employers. Finally, 85% of the GE employees indicated that they are interested in career counseling, resume development, and interview and job application assistance.

SITE REUTILIZATION

Site reutilization is a vital issue that will need to be addressed by GE and the community for economic and environmental reasons. GE has an interest in ensuring that the site is sold for a profit and the community is interested in knowing that the site will be used in a manner that will be beneficial to the entire community. It would not be constructive to the community or GE to have the site remain unused for a long period of time. In the site reutilization process, actors must consider funding, zoning, and environmental remediation issues.

RECOMMENDATIONS

CONNECTIVITY AND VOLUNTEERING

Maintaining social networks for GE employees will address social and psychological needs. A permanent solution will encourage a culture of volunteering, such as the United Way's Days of Caring, in which many GE employees already participate.

PERSONAL FINANCIAL ADVISING

Financial toolkits, seminars and advice should be provided through various mechanisms to help employees adjust to their transitioning financial situations. Each should be neutral and expertly constructed, and seminars should be divided into small sessions.

RESOURCE CENTERS

Online: A “one-stop shop” of online resources for financial, social networking, and psychological needs should be made available. It should be accessible, informative, and readily updated.

Onsite: An onsite career fair providing resources and advice would help employees recognize their future needs and the means with which to address them.

Workforce Survey: A refined survey detailing needs and demographic characteristics of the workforce may help guide educational and social service efforts to more specifically address employees’ needs.

Skills Bank: A skills bank that encompasses only the GE workers’ skill sets is necessary to serve the specific GE employee characteristics. It will allow employers, social service providers, and educators to comprehensively assess the strengths and needs of the transitioning workforce.

BUSINESS DEVELOPMENT

Training and Development: GE should subsidize small business development training and funding courses offered by various business development resource centers in Monroe County.

One-Stop Shop: Bloomington should also create a one-stop shop for business resources, which includes all information about starting a small business from various state and local resources.

Incubators: Best seen as a long-term strategy, incubators aim to give contextually appropriate support in developing businesses and spurring innovation.

Industrial Targeting: Further diversification of the local economic base beyond the life sciences and information technology sectors would strengthen the County. Targeted growth industries should include education and health. A strong partnership with the Bloomington Economic Development Corporation (BEDC) is key to diversification.

SITE REUTILIZATION

The closing of the GE plant is of great importance to many Bloomington residents, which makes the reutilization of the site an excellent topic for public discussion. Previous Bloomington site reuse and redevelopment will better inform the community and policy-makers. GE should host an issue forum that allows the community to express its needs with regard to future site use.

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INTRODUCTION TO CAPSTONE

As many areas across the United States shift from manufacturing communities to technology driven cities, workers and public officials face many challenges and decisions. General Electric (GE), once an employer of nearly 3,200 individuals from the Monroe County area, began laying off workers in December of 2000, with an initial layoff of 735 employees. Their consistent financial loss from manufacturing side-by-side refrigerators led to the unexpected decision to begin downsizing. Again in June 2001, the Bloomington area saw another 900 individuals become unemployed. After exhausting all ideas and resources, the company made the final decision to announce to their remaining 857 employees that the Bloomington plant will stop operations in early 2010.

This report will address many of the challenges and concerns faced by the City of Bloomington, organizations in the area, and the employees of GE. Specifically, it will evaluate the economic and fiscal impact that the closing will have on the Monroe County area, as well as emerging business development opportunities. In response to the needs of the employees, the report will address workforce development and social service issues. Finally, the report will assess the reutilization options for the plant site. Based on thorough research and projections of the impact the GE plant closing will have on the community, recommendations have been prepared for the City of Bloomington.

SECTION 1: ECONOMIC IMPACT

BACKGROUND

The Bloomington economy has historically been dependent upon the manufacturing sector. The presence of this industry has generated jobs, tax revenues, and involvement in community organizations. However, the manufacturing sector in Bloomington, as part of a national trend, has declined nearly 25 percent since 1995.¹ Despite the shift in focus, specific employment data² show that the following industries, manufacturing included, continue to be a large source of economic activity for Monroe County:

- Accommodation and Food Services
- Manufacturing
- Health Care and Social Assistance

Monroe County employs more than enough people to meet local demand in these industries. Additional employees are part of what is known as “export employment,” meaning that the surplus products are exported to other localities, bringing in extra income to Monroe County. On the other

¹ Indiana Business Research Center (INBRC). A Look Inside the Bloomington Economy. *2007 Benchmarking Report* for the Bloomington Economic Development Corporation, (June, 2007).

² See Monroe County Employment Location Quotients Table Appendix: A

hand, the following industries are weaker areas of economic activity compared to total regional employment:³

- Management of Companies and Enterprises
- Transportation and Warehousing
- Finance and Insurance

Monroe County does not employ enough people in the above-mentioned industries to meet the local demand, and it is likely that some of these goods and services are imported from outside of Monroe County. These industry sectors might be good targets for closing leakages in the local economy. These recent trends in Bloomington's industry sectors show that while manufacturing has declined, there are opportunities in other sectors. The information technology and biotechnology sectors have been targeted at the state and local levels as industries with the greatest growth potential for the area. The closure of the GE facility in Monroe County illustrates not only the decline in manufacturing, but also the challenge the community faces in matching worker skills and compatible jobs. From a business development perspective, attraction and expansion projects can achieve the same number of new jobs as those jobs lost. It is equally important to consider the type and quality of job opportunities available to those individuals losing their jobs.

OVERVIEW OF GENERAL ELECTRIC DIRECT EMPLOYMENT LOSS

Preferential placement will have a large impact on the local and state economy. Based upon an estimated 200 GE employee transfers, there will be an annual loss of \$10,180,000 in wages for the five-county region.

Richard Rampley, the Regional Coordinator for WorkOne, appropriately compared the impact of the GE plant closure to a divorce, explaining there is no one organization that will rehire all of them, and they will have to go their separate ways. For displaced employees, the plant closure is a huge separation from the familiar and, for some, the only career they have known. However, the closure will not only affect individual employees; it will also have an impact on the community's workforce, causing an increased demand for workforce development services and an influx of specific skills into the local skills bank.⁴

Before the plant closure was announced in January 2008, GE employed over 900 workers. At the time of this report, approximately 786 employees remain. The impact of the closure is spread throughout a five-county region including: Monroe, Lawrence, Greene, Owen, and Morgan counties. This distribution will lessen the impact to any particular county. Furthermore, 66% of the employees are eligible for

³ Other industries listed as <1.0 in the Location Quotients Table in Appendix A.1

⁴ Rampley, R. (2008, November 19). Regional WorkOne Coordinator. (N. Snow, Interviewer)

retirement, and some employees will have the ability to transfer to another GE plant.⁵ Therefore, only a fraction of the displaced workers will need to reenter the labor force immediately.

GE management provided information regarding the number of employees and the average employee salary for each of the five affected counties. As of January 25, 2008, the company had 857 employees. The distribution of GE employees by the counties in which they reside was utilized to calculate an overall average annual wage for GE employees and is displayed in Table 1.⁶ The overall annual wage for GE employees was calculated by determining the percentage of employees residing in each county multiplied by the average salary for that county. This calculation resulted in a weighted average salary per employee of \$50,900. This estimate was then used to determine the impact of the plant closure on lost wages for specific accounting domains, including the City of Bloomington, Richland School District, Richland Township, the Monroe County Public Library, and other districts.

Table 1: Average Annual Wage for a GE Employee by County^a

County	Number of Total Employees	Percent of Total Employees	Average Salary
Monroe	426	49.71%	\$52,092
Lawrence	165	19.25%	\$49,873
Greene	120	14.00%	\$50,672
Owen	115	13.42%	\$48,695
Morgan	31	3.62%	\$49,048
Total	857	100.00%	\$50,900
a: As of January 25, 2008			

An assumption was made that \$50,900 is the best estimate for determining the impact of the plant closure on lost wages for the state accounting domain. Lost wages impact the amount of income tax received by the State of Indiana, decrease the discretionary income for unemployed workers, and result in lower spending for the local economy. The biggest impact on wages will emanate from workers who are preferential hires, transferring to GE locations outside of Indiana. GE has reported that there were 200 employees who signed up for preferential placement. Currently, 61 employees have already been transferred through this process. This has resulted in approximately \$3,104,900 per year in lost wages for Monroe County. If the remaining employees interested in preferential placement do not find alternative employment opportunities within Indiana, the state could lose an additional \$7,075,100 per year in lost wages.

⁵ Wade Ellis, GE

⁶ Ibid.

DIRECT, INDIRECT, AND SUPPLIER INCOME IMPACTS

The impacts to local commerce will be relatively minor, creating a loss of less than 5% of total output and less than 1% of total employment for Monroe County.

In order to conduct an input-output analysis, the Bloomington Economic Development Corporation (BEDC) provided access to its Regional Project Assessment Systems (RPAS) software, created by Applied Economics, an economic consulting firm. The impact model in the RPAS was customized for the economic development use of the Indy Partnership, which consists of Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Monroe, Morgan, Shelby, and Tippecanoe Counties, plus the Greater Indianapolis region. The economic impact module of RPAS is based on input-output matrices from the Minnesota IMPLAN Group, Inc. and estimates direct, supplier, and consumer impacts of a business leaving or entering a specified region. For this analysis, the direct impact predicts the direct effects to Monroe County given the number of GE jobs lost and the estimated GE employee income losses. The supplier impacts estimate the number of jobs lost, income lost, and decreased output of suppliers that directly provide goods to GE. Consumer impacts estimate the number of jobs lost, income lost, and decreased output of industries that directly and indirectly provide services to GE's employees and families. Consumer impacts include locally purchased intermediate products as well as end-use consumer products. Thus, the total economic impact analysis provides information regarding both direct and indirect impacts to the community and includes a "breakdown of output and employment by industry sector" in the form of disaggregated impact reports.^{7,8}

The BEDC produced economic impact projections based on preliminary estimates of employment loss of 857 for the overall community impact. Such a high scenario is appropriate for determining the direct impact of the GE closing on the City and County, because this is the actual net loss in jobs for the community. Because GE will no longer be purchasing goods for its manufacturing plant, local suppliers to GE will lose some income and may have to lay-off employees; however, since GE suppliers are typically non-local,⁹ the supplier impact will be reduced and will likely be closer to the lower estimates in Tables 3, 4 and 5.

⁷ Wade Ellis, GE

⁸ For all information regarding the RPAS software analysis, see Appendix A.4

⁹ Information provided by GE indicated that the majority of its suppliers are non-local, though exact data was not available.

Table 2: Community Impact of Loss of 800 GE Employees

	Employment Loss	Personal Income Loss	Output Loss
Direct Impact	857	\$45,000,000	\$239,582,560
Consumer Impact	525	\$22,639,836	\$60,140,158
Supplier Impact	458	\$12,668,900	\$36,966,933
Total Impact	1,840	\$80,308,736	\$336,689,652

The estimate for “Consumer Impact” in Table 2 is based on the loss of 857 employees and is likely a worst case scenario. With the additional information GE provided on severance and retirement-eligible employees, the income impacts of the plant closure to GE employees and the private sector are reduced considerably from the original forecast due to anticipated continued spending by GE employees. Though the additional information provided by GE allowed estimation of multiple levels of employment and income loss, all discussion of consumer and supplier impacts will pertain to the most likely scenario of direct employment loss of 581 and personal income loss of \$5.4 million. This best estimate was the closest to the average of all scenarios run with the RPAS software. The estimate of 581 employees lost is based on the projection that some GE employees will continue to work in other jobs inside of Monroe County, and the estimate of \$5.4 million is based on the knowledge that many of the employees will receive severance packages.¹⁰ Table 3 also presents total employment and output loss for the lower and upper estimates of GE employment and output loss. Estimates based upon other employment loss and severance scenarios can be found in Appendix A.4.

“Consumer Impact” measures the impact to area businesses due to the decreased personal spending of GE employees. Based upon our best estimate, total household spending will be reduced by \$12,699,532 a year.¹¹ When the plant closes and GE employees attempt to lower their monthly expenditures, they will decrease household spending and eliminate luxury spending. Expected changes will be greatest in five main areas:

- Shelter
- Food at home
- Food away from home
- Utilities, fuels, and public services
- Vehicle purchase

Overall, the income and employment impacts of the GE closure are relatively minor when viewed as a proportion of the total output and employment of the area. Table 3 shows a summary of the consumer

¹⁰ Appendix A.3

¹¹ Appendix A.4: Table 14: Household Spending Impact

and supplier impacts to the economy in terms of both output and employment, while Table 4 shows the top industry impacts outside of GE.

Table 3: Revised Supplier and Consumer Impacts

Contingency		Total Loss due to GE Closing	Bloomington MSA Total	Percent of Bloomington MSA Total
Lower Bound	Employment	56	103,384	0.05%
	Output	\$5,476,840	\$5,193,000,000	0.11%
Best Estimate	Employment	120	103,384	0.12%
	Output	\$11,802,288	\$5,193,000,000	0.23%
Upper Bound	Employment	228	103,384	0.22%
	Output	\$22,473,818	\$5,193,000,000	0.43%

The only industry comprising a significant portion of the supplier impact is wholesale trade, which constitutes only 1.9% of the total employment loss and less than one percent of the total output loss. All other industries outside of GE are negligible.

Table 4: Supplier Impact to Wholesale Trade

		Loss within Industry	Percent of Total Loss	Percent of Bloomington Total
Wholesale Trade	Employment	19.0	1.94%	0.02%
	Output	\$2,074,082.0	0.83%	0.04%

Tables 3 and 4 base the total impact on mitigated spending figures; however, the direct impact should still use the figures from the 857 employee loss in Table 2. Using the direct impacts calculated from Table 2 and the reduced consumer and supplier impacts, we have calculated a likely scenario of total impact. Table 5 shows that the total impact, based upon the best estimate, will be an employment loss of 977 and an output loss of \$251,384,848. As a proportion of the overall economy they are a loss of less than 5% of total output and less than 1% of total employment.

Table 5: Total Impact, Best Estimate Scenario

	Employment Loss	Output Loss	Percent of Bloomington MSA Total Employment	Percent of Bloomington MSA Total Output
Direct Impact	857	\$239,582,560	0.83%	4.61%
Consumer Impact	56	\$4,492,920	0.05%	0.09%
Supplier Impact	64	\$7,309,368	0.06%	0.14%
Total Impact	977	\$251,384,848	0.95%	4.84%

Furthermore, our shift-share analysis demonstrates that the two industries most affected by the GE closure are no longer major drivers of the local economy, as they are not growing at the same rate as the same industries in the rest of the United States (See Appendix A.2). Not only are the impacts to the

overall economy relatively minor, but they are also most concentrated in industries that are no longer growth industries or sectors which will be the foundation for Monroe County's economic future.

There may be reemployment opportunities available to those GE employees as well as those indirectly unemployed. However, at least for GE employees, they will likely be rehired elsewhere with a sizeable reduction in pay. According to Rampley, when the workers are reemployed, it could take years to get them back to their current GE pay level. Their pay could be reduced approximately 50-70% or even as low as minimum wage.¹²

When the plant closes there will be an influx of workers with job-specific skills into the present workforce, consequently creating a surplus. The GE plant closure will also impact local workforce development organizations, such as WorkOne. WorkOne is a partner agency of the Indiana Department of Workforce Development (IDWD), whose purpose is to serve not only the worker but also the employer in order to ensure workplace success. These organizations must respond to the needs of all workers who are directly and indirectly unemployed by GE's closing.

WorkOne is a one-stop center for job searching and human resources development. Customers will find assistance in assessing their current skills, improving upon their skills, and finding a job to match those skills. Although there will be a significant increase in the number of individuals using local workforce development and support services, WorkOne and other organizations will maintain current funding levels. Therefore, workforce development organizations will have to prioritize who they will train, where they will spend money, and what programs or assistance will be provided.

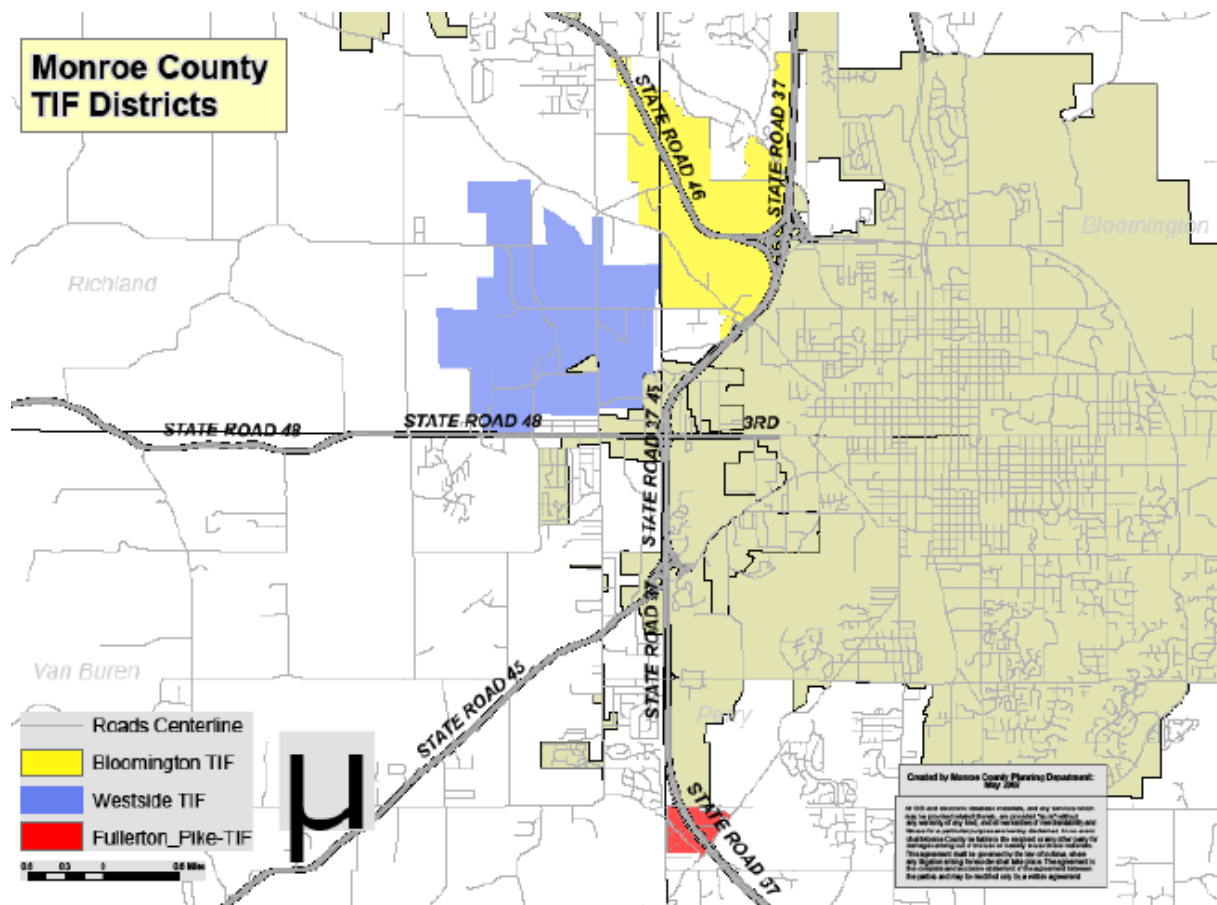
FISCAL IMPACT TO PUBLIC SECTOR

The GE plant is located inside Richland Township and outside of Bloomington's city limits; therefore most of GE's taxes are directed to the Monroe County government. The City has expressed interest in annexing the GE property; however, in order to avoid higher property taxes with annexation, GE pays a semi-annual fee to the City of Bloomington. Currently, GE has no plans to sell their real property but expects to have all personal property removed from the location within a year of plant closure in 2010.

GE is a member of the Westside Development District, which is supported by a Tax Increment Financing (TIF) bond. As a member of this district, GE provides some backing for debt service.

¹² Rampley, R. (2008, November 19). Regional WorkOne Coordinator. (N. Snow, Interviewer)

Figure 1: Monroe County TIF Districts



Source: The Office of the Mayor, City of Bloomington, 2008

Below are the expected impacts of the plant closure on the City of Bloomington, Monroe County, and TIF district.

IMPACTS ON THE CITY OF BLOOMINGTON

GE'S PAYMENT TO THE CITY OF BLOOMINGTON IN LIEU OF ANNEXATION

City revenues under the Westside Industries Agreement will remain constant until 2012, taking into account the plant closure. This outcome remains consistent in the event GE decides to sell the property before the completion of the Westside Industries Agreement.

The Westside Industries Agreement prevents the City from annexing any of the included Westside industries, such as GE, until at least 2012. Currently, the Westside Industries pay the City a total of \$200,000 a year; however, in November 2009 this price will increase to \$250,000 a year. The agreement

requires that these fees be placed into the Special Non-Reverting Fund and allows a portion of the fund to contribute to road and traffic improvements.¹³

GE's obligation to the agreement is 26.54% of the total annual fee. All industries make semi-annual payments (May and November). Each of GE's semi-annual payments equals \$26,540, for a total of \$53,080 yearly. This rate will continue until November 2009 when the price for the total Westside District will increase to \$250,000. GE's share will remain 26.54% and raise the semi-annual payment to \$33,175 or the annual payment to \$66,350 until 2012. GE is presently meeting its obligation.¹⁴

GE AND CITY SERVICES

The closure will have no direct impact on city revenue or expenditures.

GE is located in Richland Township; the City of Bloomington receives no direct revenue from GE's property taxes. According to Mike Trexler, Controller for the City of Bloomington, the City does not provide any direct services to the GE facility. Therefore, the closure will have no direct impact on the City's revenue or expenditures. Bloomington may indirectly lose revenue as GE employees begin to influence the local economy after the plant closure. Employees' lack of disposable income will affect household spending at local businesses, which could indirectly affect local businesses' ability to pay city taxes or cause a decline in local growth rates.¹⁵

IMPACTS ON MONROE COUNTY

REAL PROPERTY TAX

Real property tax revenue will remain constant with no impact on revenue distributions or debt service on the Westside TIF.

According to Kent Suiters, GE plant manager, after the plant closes GE will initiate its "roof top process," in which it will maintain the property in its current condition. GE has no intention to immediately sell its Monroe County land or facility.¹⁶ No dramatic change in GE's assessed real property value is expected. Any changes in real property tax revenue would be caused by tax rate changes implemented by the

¹³ Fowler, Jennifer Jill. *Council Approves Industries Agreement: Bloomington City Council*. Bloomington, IN: HeraldTimesOnline.com, January 22, 1998.

¹⁴ Clark, Margie Rice and Susan, interview by Ron Walker. *City Attorney* (November 2008).

¹⁵ Trexler, Mike, interview by Jessica Miller and Ying-wan Ku. *Controller, City of Bloomington* (November 6, 2008).

¹⁶ Suiters, Kent, interview by SPEA V600. Plant Manager, General Electric (September 18, 2008).

state government. Moreover, Monroe County has no control over changes in property tax rates, as these rates are decided by the Indiana state government.¹⁷

As a property within the Westside District, GE was incorporated into projections for debt service on the TIF bond. However, GE's real property net assessed value has failed to reach the predicted future worth forecasted when the bond was issued. In fiscal year 2007 – payable 2008 – GE's net assessed value for real property was \$14,869,100, which was \$3,213,900 below the future worth forecasted, or base assessed value. As a result, GE does not contribute to debt service on the Westside TIF. Instead all revenue from GE's real property tax is paid to Monroe County and its subsidiaries, listed in Table 6. No change is expected to occur.¹⁸

PERSONAL PROPERTY TAX

The plant closure will likely cause a dramatic change in personal property tax revenue because the assessed value will drop to zero due to the removal of all GE's personal equipment.

After the plant closure in 2010, GE will have all personal property removed from the site within one year; therefore, we expect a drastic change in personal property tax revenue. Due to software upgrade difficulties, the Monroe County Auditor was unable to provide sufficient data for personal property tax revenue. As a result, this analysis is unable to provide the impact on possible affected parties in 2011 due to the decrease in county revenue from the loss of GE's personal property taxes.

In fiscal year 2007 – payable 2008 – GE paid a total of \$644,281.80 in personal property tax and a late payment penalty of \$128,696.11.¹⁹ In 2011, when all personal property is expected to be removed from the GE facility, the most conservative estimate for GE's assessed personal property value is \$0.

Without further data, the impacts corresponding to the loss of GE's personal property taxes cannot be determined with any certainty. However, based on the current structure of the County's taxes and the fact that GE is located within the TIF district, there are two possible scenarios. It is also feasible that a combination of the two scenarios will occur.

1) The amount of revenue that will be lost will only impact Monroe County and its subsidiaries. Monroe County's major subsidiaries include Richland Schools, Richland Township, the Monroe County Public Library and other public districts. Below is the 2008 breakdown of where Monroe County distributes its personal property revenue. The conservative estimate assumes no change

¹⁷Clark, Barbara M., interview by J.P. Avila, Han Hee Ghil, Tsai Ling Hung, Ying-wan Ku, Wei Liu, and Jessica Miller. Monroe County Treasurer's Office (December 2, 2008).

¹⁸Smith, Cathy, interview by J.P. Avila, Han Hee Ghil, Tsai Ling Hung, Ying-wan Ku, Wei Liu, and Jessica Miller. Monroe County Auditor's Office (December 2, 2008).

¹⁹ Ibid

in this division of distribution and projects a total loss to subsidiaries based on their corresponding percentage of revenue from GE's personal property.

Chart 1: Distribution of Monroe County Revenue from GE's Property Tax: 2007 Payable 2008

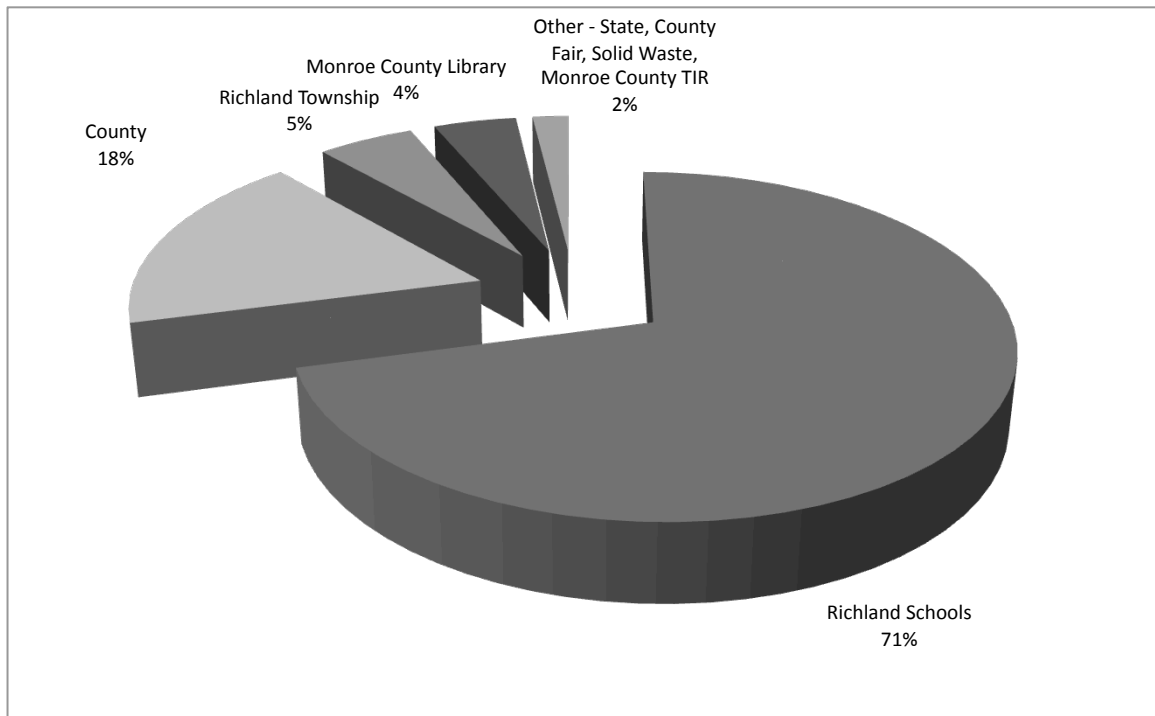


Table 6: Distribution of Monroe County Revenue from GE's Property Tax: 2007 Payable 2008

Subsidiary	Percentage of GE's Personal Property Tax	GE's Personal Property Tax
Richland Schools	70.89%	\$456,713.48
County	17.56%	\$113,155.88
Richland Township	5.17%	\$33,331.88
Monroe County Library	4.45%	\$28,643.71
Other - State, County Fair, Solid Waste, Monroe County TIR	1.93%	\$12,437.12
Total Revenue from GE's Personal Property	100.00%	\$644,281.80
Source: Monroe County Auditor's Office		

As a result, the Richland Schools will suffer the most substantial loss in revenue from the decline in GE personal property tax, an estimated \$456,713.48 yearly based on 2008 rates. The second largest loss will occur to Monroe County, an estimated \$113,155.88 based on 2008 rates.

2) The amount of revenue that will be lost will only affect the TIF district due to GE's declining contribution to debt service and the district's overall revenue. Originally, \$3.14 million in bonds were issued in 1995, but they were fully refunded at a substantial savings in 2004. In 2007,

Monroe County decided to issue \$5 million in redevelopment TIF bonds to build a new Life Sciences Center at Ivy Tech. As of April 2008, the outstanding bonds amount to \$7.2 million.²⁰

As a property within the Westside district, revenue from GE's personal property was incorporated into projections for debt service on the TIF bond. The net assessed value of GE's personal property has increased far above the predicted future worth forecasted when the bond was issued. In fiscal year 2007 – payable 2008 – GE's net assessed value for personal property was \$35,940,270, which was a dramatic increase from the future worth forecasted, or base assessed value of \$0. Under these assumptions about GE's personal property value, GE contributes \$644,281.80 to the Westside TIF district, which will lose this contribution when GE removes all personal property in 2012.

Since the TIF district was established, it has experienced fast development. The number of developed parcels has increased from 68 in 1995 to 143 currently. Other major landowners in the Westside District include Cook Group, Baxter BioPharma, PetSmart, and TOL Real Estate. Although GE is one of the largest companies in the Westside District, the change in its property value does not necessarily determine the trend for all TIF district revenue. The Westside District trend may be closely related to other major companies and their corresponding economic condition. Monroe County has made great efforts to diversify development within the district. Examples of this diversification are Ivy Tech Community College and Innovative Solutions, which focus on expanding the bio-technology sector within Monroe County.²¹

COUNTY OPTION INCOME TAX

The GE closure will not significantly reduce COIT revenue.

The GE plant closure will have little impact on County Option Income Tax (COIT) revenue for three reasons. First, GE employees' contributions constitute an insignificant portion (0.0109 %) of the total COIT revenue. Second, when the plant closes, GE employees will receive supplemental taxable income, such as severance, special early retirement option, and retirement benefits. Finally, employees are expected to find new employment opportunities.

²⁰ Monroe County Government. IEDA 2008 Summer Conference – Monroe County Westside TIF Area. http://www.ieda.org/Conference_Presentations/2008_Summer/Poling.pdf

²¹ Monroe County Government. IEDA 2008 Summer Conference – Monroe County Westside TIF Area. http://www.ieda.org/Conference_Presentations/2008_Summer/Poling.pdf

Table 7: 2008 Monroe County COIT Distribution

Unit Type	2008 Distributive Shares	Percentage
Bloomington City	\$8,166,269	40.00%
Monroe County	\$8,004,427	39.20%
Township	\$1,209,751	5.90%
Town	\$402,117	2.00%
Monroe County Public Library	\$1,952,676	9.60%
Special ^a	\$672,084	3.30%
Total	\$20,407,324	100.00%
(GE Employees' contribution)	-\$221,911.90	-0.0109%
Source: 2008 COIT Distribution Report (WWW.IN.GOV) & Data obtained from GE		
a: Special includes Perry-Clear Creek fire protection and Bloomington transportation.		

FISCAL IMPACT TO NONPROFIT SECTOR

United Way will lose its third largest contributor to the workforce campaign when GE closes.

The GE plant closure will impact the fiscal needs of the nonprofit social services community, particularly the United Way of Monroe County. Due to confidentiality, the United Way could not share specific financial information; however, GE has consistently contributed significantly to the organization. GE, Bloomington Hospital, and Indiana University are the three largest United Way workplace campaign contributors. All three organizations received the United Way's Pillar Award, which is "given to organizations that provide a solid foundation for the campaign. This award goes to businesses that raise \$50,000 or more."²² In 2006, GE employees contributed over \$50,000, and a GE employee also sat on the United Way Campaign Cabinet. Barry Lessow, Executive Director of United Way of Monroe County, explained that while GE has pledged a corporate gift of \$22,000 in 2008 and 2009 through the GE Foundation, a pledge has not been made further into the future.²³ The negotiation of an "exit package" with GE, meaning charitable donations to the United Way from the corporation after GE has left the community, is per the discretion of community leaders. The mayor would likely have the most influence with GE in this matter. The loss of GE's individual and corporate contributions will have a significant impact on the United Way's ability to meet future campaign goals at a time when the demand for services is likely to increase.

²² 2006 United Way Annual Report

²³ Interview with Barry Lessow, Executive Director of United Way of Monroe County

Lessow relayed two main concerns that the United Way will face after the plant closes. First, it will be difficult to stay connected to the workers once they leave GE and ensure that they understand what services are available to them through the United Way. GE leadership is responsible for initiating the campaign at their plant each year and encouraging employees to contribute. Finding ways to connect individuals and their families to the mission of the United Way outside of the GE campaign is an ongoing effort of the United Way team. Furthermore, although many GE employees have given generously to the United Way for many years, most did so entirely through their workplace campaign, which includes payroll deductions and other convenient options for gifts. As such, a second challenge that the United Way will face is in encouraging campaign contributions from individuals who once contributed to workforce campaigns.

SECTION 2: NEEDS ASSESSMENT

INTRODUCTION

As the GE plant closure draws near, it is necessary for local officials, educational institutions, GE representatives, and leaders in the non-profit sector to prepare for the increased need in the community that will accompany the plant's departure. By identifying these needs before the plant closes, the community will be better equipped to provide assistance.

SOCIAL SERVICE NEEDS

GENERAL FOUNDATION FOR ADDRESSING WORKERS' NEEDS

Displaced workers will have individual difficulties that require community-generated, proactive solutions.

Many social scientists consider the study of the Austrian town of Marienthal by Jahoda et al in 1930 to be the foundation for understanding unemployment as it relates to the social services.²⁴ One factory employed nearly everyone in the City of Marienthal, and when the factory closed, the entire town became unemployed. This serves as an excellent case study for social scientists to examine how individuals deal with unemployment. The results of the study suggest that unemployment takes away "enduring human needs" such as shared experiences, structured time, collective purpose, status and identity, and required regular activity.²⁵

²⁴ Cole, Matthew. "Re-thinking unemployment: A challenge to the legacy of Jahoda et al." *Sociology* 41, no. 6 (2007): 1133.

²⁵ *Ibid*, 1134.

Over the last 20 years, further studies have been conducted. In particular, a study by Fryer and McKenna completed an experiment comparing temporarily unemployed workers with long-term unemployed workers, and found the long-term unemployed workers were less likely to develop a standard routine and were more restless about time than the temporarily unemployed workers. According to the authors, the perception of unemployment and lack of control is more powerful than the actual act of not working.²⁶ This research provides the City of Bloomington with two important pieces of information. First, the study shows that human costs are a central problem with unemployment. Second, the Fryer and McKenna research suggests that some of the consequences of unemployment can be overcome by providing workers with a sense of control over their employment future.²⁷

In Bloomington's case, the displacement that many of these workers will face could actually spur a new sense of control in workers. If this is the case, Bloomington workers may be more motivated to take part in retraining programs and other structured activities than other individuals. The GE plant in Bloomington has been reducing its workforce for a number of years and GE workers have seen thousands of their peers laid off. The current plant closing provides a level of control for these workers, because they have over a year of notification and have been apprised of their future benefits. Bloomington could capitalize on this higher sense of control in workers by engaging them in training programs and connecting them to social programs to help soften the transition following the plant closure.

PERSONAL FINANCIAL PLANNING NEEDS

Financial guidance is needed to help GE employees deal with health care costs, retirement, and construction of and adherence to a new budget.

Research and interviews with members of the Bloomington community familiar with the plant closing suggest personal financial planning is one of the top concerns facing GE employees. Many employees may not fully understand the situation they will face when the plant closes. Previous studies of displaced workers show an overall decrease in earning potential following job loss.²⁸ Research also indicates that wage losses often increase in relation to the level of tenure an individual has with a firm.²⁹ This suggests that many of the workers at GE will face lower wages following the plant closing and will need to budget

²⁶ Fryer, David and McKenna, Stephan "The laying off of hands: Unemployment and the experience of time." In *Unemployment: Personal and social consequences*, by Steven Fineman. London: Tavistock Publications, 1987.

²⁷ *Ibid.*

²⁸ Kletzer, Lori G. "Job displacement." *Journal of Economic Perspectives* 12, no. 1 (1998): 115-136.

²⁹ Crossley, Thomas F., Jones, Stephen R. and Kuhn, Peter. "Gender differences in displacement cost: Evidence and implications." *The Journal of Human Resources* 29, no. 2 (1994): 461-480.

their finances according to their new income levels. Bryan Lemonds, a financial counselor at Raymond James in Bloomington, has worked with displaced workers from past layoffs and plant closings in the area. He cautioned that the most pressing financial problems for these workers will be health care costs and learning to live within their new budgets without depleting their severance pay and retirement savings to maintain the lifestyles to which they are accustomed.

PSYCHOLOGICAL NEEDS

In addition to the provision of counseling services, there is a need for strong encouragement of utilization of these services.

Workers with profiles similar to that of the displaced GE employees often have emotional difficulties. Leana and Feldman explain that the research shows workers who lose their jobs display the following symptoms:³⁰

- Increased depression
- Increased boredom
- Decreased life satisfaction
- Increased loneliness and social isolation
- Decreased sense of daily structure
- Increased feelings of apathy, passivity, and resignation
- Overwhelming pessimism and fatalism about life

The social services community should address these unique needs by extending services to promote the mental well-being of workers. Unfortunately, addressing these needs is not as easy as offering services to the members of the GE plant. Theory and similar plant closure cases suggest workers are unlikely to recognize the importance of psychological needs and seek help for these issues. Psychological needs are best addressed when paired with workforce services.³¹ Therefore, efforts to provide workforce development services to GE workers should include access to psychological services.

³⁰ Leana, Carrie R. and Feldman, Daniel C. *Coping with job loss: How individuals, organizations, and communities respond to layoffs*. New York: Lexington Books, 1992: 59.

³¹ *Ibid*, Leana, Carrie R. and Feldman, Daniel C. "Finding new jobs after a plant closing: Antecedents and outcomes of the occurrence and quality of reemployment." *Human Relations*, 48 (1995): 1381-1401, Gordus, Jeanne P. "The Human Resource Implications of Plant Shutdowns." *Annals of the American Academy of Political and Social Science* 475, (September 1984): 66-79.

SOCIAL NETWORK NEEDS

The GE plant closing will disrupt the normal social networks in which employees interact.

Many employees will also lose the social network they maintained primarily through the workplace. This loss can prove to be a vital part of their identity. Researchers argue that men are particularly affected by unemployment because of the social stigma of male unemployment.³² The literature shows that individuals are not likely to be aware of these impacts prior to the plant closing and are not likely to seek assistance to address them. Therefore, the results of the WorkOne survey, which suggest little demand for social services, are not surprising. Still, social services should remain a priority for all parties involved. Barry Lessow also concurred on the importance of social networking options for the employees once the plant closes.

GE is not just a place of work but also a family for its employees. Social network theories relating to plant closings show that maintaining activity levels and friendship is important to mental well-being for displaced workers. Finding ways to maintain GE employees' current social network or build new networks through community involvement and volunteering will be essential to maintaining the overall well-being of the GE workers and their families. Social networks are also important in the re-employment of the workers, because social networks often serve as a resource when searching for new jobs.

One study found that the use of social networks is often an important factor in the quality re-employment of laid-off manufacturing workers. Workers tried to find new jobs through training and traditional job search methods. However, the individuals who were sampled often found low-quality, service positions at salary levels not commensurate with their previous positions. However, once the individuals began using their social connections to find jobs, they found higher quality employment.³³ This study is not exactly comparable to the GE plant closing since workers in the study were in significantly lower income brackets. Still, it provides a key insight about the importance of considering the impact the plant closing will have on the workers' social lives, which may affect the quality of their re-employment.

³² Cole: 1133-1146.

³³ Zippay, Allison. "The role of social capital in reclaiming human capital: A longitudinal study of the occupational mobility among displaced steelworkers." *Journal of Sociology and Social Welfare*, 28, no. 4 (2001): 99-119.

WORKFORCE AND HUMAN CAPITAL NEEDS

EDUCATIONAL NEEDS

Training is needed, not only to develop new skills, but to recognize, market, and utilize the skills that GE employees currently possess.

Prior to the announcement of the plant closing, GE had over 900 employees. According to survey data acquired through WorkOne and GE, 89 employees have already retired early and 84 employees were preferential hires at another GE plant location. As of November 12, 2008, the plant employed 778 workers.³⁴ Table 8 contains the age composition of the remaining 778 GE employees. Research shows that age is a critical variable when it comes to unemployment length, re-trainability, and education. For instance, the older the worker, the more likely he or she will be unemployed for a longer period, have less successful re-employment experiences, and sometimes fail to gain employment at all. Retraining also becomes difficult for older workers because they may experience non-economic barriers such as lower educational levels due to higher age or apprehension about returning to school.³⁵ This is consistent with the data obtained from GE and WorkOne surveys. The results show that over 97% of the current employees are 40 years old or over. The WorkOne survey indicates that 49 of the 537 workers that completed the survey have less than a high school education, and 20 to 30 GE employees have literacy problems. Nevertheless, only 14% of the surveyed employees indicated an interest in educational assistance.

Table 8: Employee Age Composition

Age Range	# Employees	Percent of Total
60 or Older	54	6.94%
50 to 59	409	52.57%
40 to 49	299	38.43%
30 to 39	15	1.93%
20 to 29	1	0.13%
Under 20	0	0.00%
Total	778	100.00%
Source: Ellis, Wade. Interview by Nicole Snow. Human Resources Manager, General Electric, (2008, November 12).		

³⁴ Ellis, W. (2008, November 12). Distribution of Age among General Electric Employees. (N. Snow, Interviewer)

³⁵ Jeanne Prial Gordus, The Human Resource Implications of Plant Shutdowns (*Annals of the American Academy of Political and Social Science*, Vol. 475, 1984)

Despite the small number of GE employees expressing interest in continuing studies, there is still a need to equip these employees with the necessary skills to be rehired in today's globally competitive job market. For the nine percent of workers who do not have a high school diploma, General Education Development (GED) preparation courses may be an option to prepare them for the GED exam. Currently, GE will provide up to \$12,500 for employee education, which is included in the employee severance package. In addition to the severance package, GE has offered employees tuition reimbursement as a way to take advantage of education opportunities. These workers possess skills that are in demand; however, they do not know that these skills are in demand nor do they know how to market these skills. The workers need to be able to identify their skills in order to find a new job. In some cases, the plant closure will be the catalyst for workers to move into different careers or obtain more advanced degrees. Therefore, the employees should have assistance in identifying their transferrable skills and assessing their educational and training needs.

Concurrently, retraining assistance will be required to aid displaced workers who are changing occupations from the Electronic Manufacturing Industry to growth industries. Case study analysis has shown that public policy which emphasizes retraining as the primary solution to structural unemployment, including plant closures, has been the most effective strategy in ensuring laid off workers' employment needs are met. However, an analysis of published literature on retraining programs designed to assist with plant closing displacement found that participation was low, ranging from 5.1 percent at one site to 16.4 percent at another.³⁶ This low rate may be attributed to the belief that only lower, entry-level positions are available, so workers decline to participate. It is important to ensure that retraining equips the displaced workers with skills that will make it easier for them to reenter the workforce. To do this, identification of thriving industries is important. Both Monroe County and the greater Bloomington area have seen tremendous growth in life sciences and information technology, and a large cluster of these types of industries continues to expand. In addition, industries composed of construction; wholesale trade; professional, technical, and educational services; and administrative support and management, have shown significant growth.³⁷

One of the first steps to ensuring employees are placed in the proper industries is establishing a GE Skills Bank. A skills bank is an economic development tool used to match the human resources of an area by carrying out an inventory of the skills and backgrounds of the area's workforce.³⁸ An inventory of skills will assist individuals in identifying what skills they already possess that can be beneficial to the current industries. Secondly, it will help identify gaps in skills levels and determine the sort of training required to match the skills needed to be employable in the thriving industries. After an inventory of GE employee skills and identification of upcoming clusters and industries, competency-based training may be used to ensure workforce supply meets the demands of employers. In Bloomington, a Life Science

³⁶ Jeanne Prial Gordus, *The Human Resource Implications of Plant Shutdowns* (*Annals of the American Academy of Political and Social Science*, Vol. 475, 1984)

³⁷ See Appendix A.2

³⁸ Blakely and Bradshaw. *Planning Local Economic Development* (2002)pg.259

Certificate and a HIRE Certification are available to help workers develop necessary skills and are explained below.

LIFE SCIENCE CERTIFICATE

Provides non-credit training for administrative work in the Life Science Industry.

This program is administered by Indiana University Continuing Studies (IUCS). It is a non-credit program that provides an overview of the Life Sciences Industry. Each course in the program focuses on a specific aspect of management. This certificate is directed towards enhancing the skills of community members who may want to find work in the Life Sciences Industry. The core courses offered include Teamwork and Communication, Managing Projects, Regulatory Affairs, and Organizational Development in the Life Sciences Industry. Thus, the program is tailored toward equipping its participants with both the hard and soft skills required in the life sciences.

HIRE CERTIFICATION

Provides job specific skill sets and certifications tailored by employers to suit their needs.

The Help in Reaching Employment (HIRE) program is coordinated by Ivy Tech Community College-Bloomington, WorkOne Bloomington/Indiana Department of Workforce Development, Monroe County Community School Corporation (MCCSC) Adult Education, and Franklin Initiative/Greater Bloomington Chamber of Commerce. This program provides adults with certification in areas such as computer operations, general office administration, applied math and science skills, and soft skills development. HIRE will provide specific skill-set training, as identified by local employers. This is a key element in the HIRE program because the skill set offered to the adult community has been identified by employers as a vital one. Upon completion of the program, the certificate holder will receive preferential treatment in securing a job interview. HIRE also offers flexibility in training methods to better accommodate individual needs.

GE has afforded its employees a \$12,500 tuition reimbursement, while IUCS, through the Bernard Osher Foundation, will offer scholarships in the form of tuition assistance for both part-time and full-time continuing education students. Full-time students (12 credits or more) are eligible for up to \$3,000 per academic year, and part-time students (6-11 credits) are eligible for up to \$1,500. Employees can take advantage of these financial incentives to help acquire certificates that will make them employable in the growing industries.

LABOR MARKET ASSISTANCE

GE workers will need assistance in developing documents, interview skills, and completion of Internet based forms and applications.

According to GE's survey, 85% of the employees indicated interest in some form of workforce development. These services included career counselling, résumé development, interview assistance and job application assistance. The GE survey indicates that the average worker has been employed at GE for 25 years, ranging from one to 41 years. Based on this data, it can be assumed that most employees have been out of the job market for a significant period of time. Thus, they will require assistance in résumé development, interview preparation, completing computerized application forms, and personal presentation. The primary source for meeting this need is the WorkOne agency. The displaced workers from the GE plant in Bloomington will place additional demands on these workforce development services. In consideration of this fact, the South Central Region 8 Workforce Board Inc. has requested \$825,000 from the Department of Workforce Development specifically to assist GE workers "in making the transition from their current employment to new jobs, new careers, and new opportunities."³⁹ Currently, there is a Rapid Response Team in place to handle the plant closure and its impact on workers. Richard Rampley is the lead coordinator of the team, which also consists of a Regional Operator representative and WorkOne management and professional staff.

The Rapid Response Team is collaborating with the GE Worker Adjustment Committee as they plan to divide the requested funds into two tiers. Tier I will include pre-layoff funding in the amount of \$25,000 for planning and peer counselor training. Tier II funding, in the amount of \$800,000, will provide supportive services that Trade Adjustment Assistance will not cover as well as training funds. A majority of the grant funds will be used to create an on-site resource center located at the GE plant. The resource center will be staffed with full-time employees focused on assisting GE workers in developing their soft skills, job searching skills, or providing information on retirement planning. They will also assist GE workers to utilize funds that have been allocated for their education or retraining. WorkOne would also like to use funds to provide training programs at the GE plant. Rampley explained that pre-layoff services are vital because research has found that if these services are provided beforehand, the employees' length of unemployment will be greatly reduced.⁴⁰ With the proper resources, the collaboration can help individuals make favorable career decisions. Assessing the workers' skills and their strengths and weaknesses, creating a skills bank to aid workers and employers, and helping

³⁹ Rampley, Richard. *Regional Rapid Response Strategic Plan- General Electric Bloomington*. (2008) pg 1.

⁴⁰ Rampley, Richard. *Regional Rapid Response Strategic Plan- General Electric Bloomington*. (2008).

workers explore their career options are all possible outcomes that could result from this funding and collaboration.

SITE REUTILIZATION NEEDS

INTRODUCTION

Site reutilization is a vital issue that will need to be addressed by GE and the community. GE has an interest in ensuring that the site is sold for a profit, and the community is interested in knowing that the site will be used in a manner that will benefit the entire community. It would not be constructive to the community or GE to have the site remain unused for a long period of time.

CITY AND COUNTY INTERESTS: IMPACT OF PLANT CLOSURE, AND WHY SITE REUTILIZATION MATTERS

Reutilization of the GE site presents an opportunity for sustainable and equitable economic growth. Site reutilization should be an immediate concern to the City and County for economic development and environmental reasons.

The Indiana Brownfields Program identifies several ways a locality can benefit from successful public-private cooperation in a redevelopment project: pairing measures to boost economic vitality with environmental protection efforts; stimulating the economy via investment and new jobs; returning abandoned or unutilized properties to those that are tax-generating; generally improving the local aesthetic environment; and preventing sprawl through urban revitalization.⁴¹

Specific reasons why both the City of Bloomington and Monroe County should take an active interest in the site reutilization process include:

- Potential economic development west of Bloomington—this area of the County has seen economic vitalization in recent decades and the City and County should work to continue this trend.
- The chance to diversify the productive economic sectors of the County by stressing either sustainable industrial reuse or creative non-industrial use options that serve a community need.
- Contributing to sustainable and equitable development in the County that corresponds with goals identified by the Bloomington Commission on Sustainability.

⁴¹ Indiana Finance Authority. Brownfield fact sheet. IN.gov. <http://www.in.gov/ifa/brownfields/2558.htm>.

Drawing on previous examples of site reutilization both locally and in the greater Indiana area, there are some key points to consider concerning the community impact of the plant closure in terms of the physical site itself:

- A large, vacant site can detract from economic development and aesthetic quality as well as pose potential environmental or health concerns based on the type of former use.
- Community participation in site reutilization can help mitigate these potentially negative effects. However, meaningful participation is contingent upon open communication between community stakeholders at the beginning of the reuse process.
- Community members and redevelopers invested in the site reutilization process should think creatively when designing options for potential reuse. Actors should not limit themselves to considerations based only on the former use of a property, and the community can gain much from mixed or different uses.

These case studies are detailed in Appendices B.2 and B.3.

SITE TYPOLOGY AND THE REUSE PROCESS

Because the plant closure process should take several years, it is prudent to focus on pre-development, the first step of the reutilization process.

The EPA's document "Anatomy of a Brownfields Redevelopment" outlines four typical steps in the redevelopment process of a brownfield:⁴²

1. Pre-development of the idea and the logistics of reutilization by all actors
2. Finalizing the agreement between the original site owner and the developer
3. Remediation and development of the site itself
4. Long-term maintenance of the site.

Each step is detailed in Appendix B. Because the GE plant will not close until January 2010, we have chosen to concentrate on Step 1 throughout our research, analysis and recommendations.

Site reutilization is often couched in terms of "brownfield" reuse, although not all sites automatically qualify as brownfields. The EPA's official definition of a brownfield is "a property on which expansion, redevelopment, or reuse may be complicated by the presence, or perceived presence, of contamination."⁴³ Thus, it is important to note that only the potential for contamination or perception

⁴² Environmental Protection Agency. *Anatomy of a Brownfields Redevelopment*.
http://www.epa.gov/brownfields/anat_bf.htm.

⁴³ Ibid.

of some kind of contamination is required to categorize a site as a brownfield. The GE site has not been designated as a brownfield. However, regardless of official designation, if an industrial site is to be reutilized, the following must be considered:⁴⁴

1. **Environmental Assessment:** If the community is considering reusing the GE site, the process must include a Phase I Environmental Assessment to determine whether there is sufficient evidence of contamination to warrant an assessment and remediation.
2. **Zoning:** If the community is considering reusing the GE site for non-industrial purposes, it will need to be rezoned. The steps of this process are found in Appendix B.
3. **Funding:** Because of GE's use as an industrial facility, the community and/or redevelopers have access to an entirely separate federal and state funding stream available for assessing potential brownfields. Should GE be officially designated as a brownfield, it will have further access to remediation and development funds.

The Indiana State Brownfields Program⁴⁵ outlines six general categories of site reutilization. These are:

- Industrial, such as types of manufacturing or the shipping and/or redistribution of goods
- Commercial, such as office space for various businesses, actual business storefronts (retail space), and/or offices for services
- Residential, such as various types of housing (low-income apartments through to luxury condominiums)
- Public, such as city/county services like administration, planning and community development, police and emergency dispatch, child/family assistance, school buildings, or other uses
- Greenspace, such as newly built parks or trails and fields for recreational use
- Mixed, such as any zoning-appropriate mixture of uses mentioned above

Based on our knowledge of and experience in Bloomington and Monroe County, we added a seventh category: non-profit use, such as empty space for one or more non-profit organizations for operations, management, administration, special events or other uses.

In this report, we consider all seven general categories as potential models of site reutilization. Please see Appendix B.2 for a list of key examples of site reutilization here in Monroe County and more detailed information on each case. Appendix B.3 includes several additional examples of site reutilization at industrial and manufacturing sites across Indiana.

⁴⁴ Bloomington-specific information for each of these steps is provided in Appendix B.

⁴⁵ Indiana Finance Authority. Indiana Brownfields Program. IN.gov. <http://www.in.gov/ifa/brownfields/>

SECTION 3: RECOMMENDATIONS

INTRODUCTION

As need increases, it is necessary for the community to provide adequate mental, social, technical, and educational support for workers who will be displaced as GE closes. While this is often well understood, the methods through which that support can be provided are not always clear. We propose a number of ways through which services can be most efficiently and effectively provided.

CONNECTIVITY AND VOLUNTEERISM OPTIONS

Connectivity and volunteerism options help to maintain social networks for GE employees, addressing social and psychological needs.

The needs assessment suggests social networks are important for addressing psychological and re-employment needs of displaced workers. One key way to help build social networks is through professional organizations and volunteering, something many GE employees currently do. Ron Walker of the Bloomington Economic Development Corporation (BEDC) described the GE employees as major contributors to the social services sector through their continued volunteering in the community (such as fixing trails, volunteering with youth leagues, etc.). GE workers can maintain contact among themselves once they leave GE via the GE workers' union, International Brotherhood of Electrical Workers, Local 2249. The union can continue to offer gatherings and services to its members. However, one major challenge to relying on the union is many of its leaders are very employable and may soon move elsewhere. Therefore, in order to maintain the opportunity for workers to stay connected through the labor union, the union must plan for potential turnover.

Another option for continued social connection is the United Way's Days of Caring. Every spring, members of the Monroe County community donate their time to volunteer for causes they care about. Ideally, groups volunteer together. Organizing a volunteer opportunity specifically for former GE employees could serve as the impetus to get the employees together and create a trend of volunteering in future years. Days of Caring 2009 represents a great opportunity for GE employees to begin volunteering as a group, while they still work together every day. GE involvement in Days of Caring may also provide the United Way with an avenue to connect with employees on an individual level and promote charitable contributions after the individuals leave GE.

PERSONAL FINANCIAL ADVISING

Financial toolkits and advice should be provided through various mechanisms to help employees adjust to their transitioning financial situations.

To address the pressing financial situation of GE employees after the plant closes, the United Way of Monroe County, the City of Bloomington, WorkOne, and GE all agree that a financial services seminar should be held for the employees. Barry Lessow suggested this panel should be "brand-free" and comprised of experts from throughout the community. Employees will face a range of financial issues when they leave GE; each family will have varying concerns and may or may not feel comfortable addressing these concerns in a public setting. In order to provide more privacy, Lessow suggests a series of small sessions led by a neutral facilitator. The panels offer an opportunity for general information presentations, but employees and their families should also have the opportunity to speak one-on-one with panel members in private post-discussion.

To review the content for the panel discussions, the United Way proposed holding a facilitated planning session with members of Bloomington's financial sector. In order to remain impartial to the financial sector, invitations to the planning session should be given to all individuals and corporations involved in the financial sector both through direct invitations and through an open invitation to the community, such as a press release.

RESOURCE CENTERS

ONLINE

A "one-stop shop" of online resources for personal financial, social networking, and psychological needs should be made available.

As the closing of the plant approaches, GE employees will receive significant amounts of information and resources. It is important that they have one central location where they can access this information. Based on our conversations with local community leaders and through our research of other cities' responses to similar situations, we recommend that the City sponsor a website specifically for the GE employees and their families. Currently, there are several websites, including the City of Bloomington, United Way, and Herald Times, that all attempt to provide information to GE employees. There is, however, no "one-stop shop" where employees, their families, and community members can get information on topics specifically related to them. This makes it somewhat frustrating for an employee to identify potential resources, and it could lead employees, most of whom did not use the Internet, to abandon their efforts to find resources. Therefore, we propose a collaborative effort, led by the Bloomington Task Force, to develop an online information center that includes a resource center. This website should include the following elements:

- An easy to remember web address.
- A news feed for organizations to post news and updates.
- A section listing all upcoming events.
- Links and contact information for different jurisdictions, social services, financial assistance, workforce services, human services and counseling, information and referral, community involvement and business development opportunities.

It is important that the website organization is intuitive and that all links access a page that is pertinent to GE workers. All organizations linked on the website should make every effort to create a page specific to GE workers and the resources their organization has to offer. The website should clearly identify organizations that create a GE specific resource page.

ONSITE

An onsite career fair providing resources and advice will help transitioning employees recognize their future needs and means with which to address them.

Currently, WorkOne has requested funds from the Department of Labor to create an Onsite Resource Center for the GE employees. An Onsite Resource Center would be ideal for assisting employees in their transition to either retirement or another career. Workforce development agencies, educational institutions, and social organizations should coordinate an onsite career fair that invites GE workers and family members to attend. However, in order to improve coordination among key organizations, GE should hold a comprehensive meeting with a spokesperson from each key organization that is improving employee transition.

The needs assessment suggests workers are unlikely to recognize social service and psychological needs prior to plant closings. Further, as previously mentioned, social network theory indicates that social networks are important when laid-off workers are looking for new jobs. It is important for GE to emphasize the importance of using social connections in finding new employment when helping their workers to prepare for the plant closing. Other cities facing plant closure have found that addressing social and psychological services in conjunction with workforce services is more likely to address the workers' social and psychological needs. Therefore, the Resource Center proposed by WorkOne should include space for psychological services and should collaborate with the Monroe County United Way to ensure pertinent social service information is available.

WORKFORCE SURVEY

A refined survey detailing the needs and demographic characteristics of the workforce may help guide educational and social service efforts by identifying specific employee needs.

We attempted to refine the GE employee data by developing a comprehensive survey that would identify GE workers' preferences. In essence, these preferences involved such issues as education programs, potential industries to transition toward, and experiential background information. This survey is highly relevant to the overall success of the project due to the potential contribution for policy recommendations. The survey will reveal valuable insights into the correlations between demographics of the GE population and worker preferences. The survey was created in conjunction with Ron White of

the Indiana University Continuing Studies Program. Upon creating the survey, we employed a program evaluation methodology.⁴⁶ The survey was designed to have the optimum accuracy and response potential. A copy of the Preferences Survey has been provided in Appendix E.

Unfortunately, GE has not conducted the survey because the employees are experiencing survey fatigue from previous surveys they have taken this year. However, GE has shown an interest in distributing the survey to employees during the first quarter of 2009. We suggest that the survey be administered as soon as possible to ensure that collaborative efforts among key organizations in the community are meeting the workforce development and social service needs of the workers. The survey will provide key insights into individual worker interests as to what sort of retraining they are interested in obtaining, whether an employee would like to obtain a certificate or college degree, and what kind of assistance workers would like to help develop their soft skills. Assistance and retraining tailored to meet the needs of the GE employees will increase the appeal to them. Workers will be more likely to utilize assistance and retraining programs before the plant closure occurs; thus, spending less time unemployed after they are laid off.

SKILLS BANK

A skills bank will allow employers, social service providers and educators to assess the strengths and needs of the transitioning workforce in a comprehensive manner.

A skills bank, an inventory of the employees who will reenter the workforce, should collect information on their skills and work experiences as well as identify the employees' transferable skills. It will also distinguish the types of skill building training that are essential for the workers to find a job that pays a similar wage compared to what they were making at GE. It is unclear whether employees need assistance in identifying and building hard and soft skills and whether further training is required to qualify employees for jobs in growth industries. This is why an administered survey that focuses on understanding the skill level of these employees is essential. The State of Indiana currently has an online skills bank called Indiana Career Connect that allows citizens to list their skills, job experiences, and training in a database that is viewable to Indiana employers.⁴⁷ However, because of the unique transferable skills they possess, we believe a skills bank that contains only an inventory of the GE workers would be a useful tool for the City of Bloomington, the growing industries in the area, and the workers themselves in terms of job replacement.

⁴⁶ This survey employed ideas of design structure, as learned in the course V-562 Public Program Evaluation. Professor Pirog is the Instructor of V-562 & Editor of the *Journal of Policy Analysis and Management*.

⁴⁷ www.indianacareerconnect.com

BUSINESS RECOMMENDATIONS

TRAINING AND COURSES

Development of entrepreneurial talents can help employees start and maintain a new business.

A portion of the GE workforce indicated interest in starting their own businesses. It is unclear whether any of these individuals have previously owned a business or have taken any business related courses. In consideration of this interest, we recommend that courses taken by these individuals for the purpose of starting a business be considered continuing education by GE, and therefore, be covered under their education reimbursement program. The types of business programs available include business preparation courses, counseling, accounting courses, business plan development and financing courses. The resources available for facilitating the growth of small business start-ups and businesses unique to the community include training and funding opportunities. The main resources identified are the Indiana Small Business Development Center (ISBDC) South Central Indiana Branch, the U.S. Small Business Administration (SBA), the City of Bloomington, the Bloomington Urban Enterprise Association, the Business Ownership Initiative (BOI), the Central Indiana Women's Business Center (CIWBC), SEED Corp., and Ivy Tech.

The ISBDC South Central Indiana Branch serves as a gateway for small business entrepreneurs. It does not conduct any systematic advertising nor lend any funds. Instead, the ISBDC provides extensive assistance in preparation to write a business plan, offers various workshops (e.g. personal finances, expanding operations, becoming certified as a minority owned business) and refers clients to local U.S Small Business Administration approved intermediary lending institutions, such as local banks.

The Business Ownership Initiative (BOI), which also includes the Central Indiana Women's Business Center (CIWBC), divides its operations into two tracks: those who have a business idea and those who are looking to expand their small operations. For individuals who only have an idea for a business, BOI offers workshops on topics including personal finances, market research, operating a for-profit or a non-profit organization, and business plan writing assistance. For individuals who wish to expand their businesses, it offers workshops in business taxes, QuickBooks, and business finance, as well as small loans of up to \$5,000. Courses and workshops can cost up to \$60 per session and duration varies according to the needs of the individual client. Examples of successful ventures created as a result of BOI include janitorial services, alterations services, event planning, and a travel agency.⁴⁸

⁴⁸ Personal communication, October 29, 2008

SEED Corp. is a Bloomington based non-profit that facilitates the growth of small businesses through education and financing. They offer small business planning courses, commercial microloans and long-term business counseling. Sections I and II of the business planning courses are offered in the spring and fall, each with an enrollment fee of \$100 and \$175, respectively. Completion of both sections is required prior to applying for a loan through SEED Corp. The financing provided from the SBA and SEED Corp. can provide companies with loans of up to \$35,000.

ONE-STOP SHOP

Readily available business development resources can help displaced employees and the City as a whole.

In the larger context of Bloomington's future development, we recommend the creation of a one-stop business center to further accentuate the business climate for economic development. While researching business opportunities in the Bloomington area, it was often difficult to find information on business development issues such as small business funding, business training courses, government regulation and permits, as well as business networking opportunities. A business center could provide a centralized location of information regarding such services, while easing the confusion often associated with starting or growing a business. With active groups such as the Bloomington Economic Development Corporation (BEDC) and the Chamber of Commerce that work in tandem with the City's economic development goals, the creation of a centralized online information center would help these entities collaborate while streamlining their ability to help business owners in the local area. As Bloomington transitions from a manufacturing to a knowledge-based economy, the ability of the community to offer excellent customer service and responsiveness becomes a major competitive factor in attracting new business and talent. With Bloomington's new focus on fast-paced industries such as the life sciences and technology, programs that simplify business processes and increase the ability of new businesses to get off the ground become more important.

Given Bloomington's relatively small size, the creation of a one-stop information business center on the City's website would suffice in providing a centralized source of information. The website could host information related to permitting, zoning, financing options, loan programs, training opportunities, and more. The website should be designed to help acquaint business owners with development requisites and resources so they can walk themselves through the process. With better access to information, businesses can save time and money, while easing the burden of the City's economic development personnel in answering questions. Additionally, by tracking website click-throughs and requests for information, the City can proactively identify trends or future business development needs.

A one-stop business center is a low-cost way for Bloomington to pool information about its resources into one location, while encouraging the collaboration of business development organizations with the City. It also provides a valuable resource to potential businesses and helps to ensure Bloomington's competitive position in a fast-paced, knowledge-based economy.

INCUBATORS

Best seen as a long-term strategy, these initiatives help to give contextually appropriate support to developing businesses.

Examination of research on incubators provides guidance for structuring the relationship between local incubators, including the Indiana University Research and Technology Corporation (IURTC), InVenture, and the community. We recommend that the goals of the community and incubators be coordinated to ensure the best outcome. Previous research indicates that the success rate for incubated companies is much higher than for most new businesses. Most firms typically stay in the community in which they started. Job creation is initially small, but in the long term this increases, indicating that incubators are best seen as a long-term strategy.

The McNamera and Markely⁴⁹ study found that while incubators create job growth and income for the state and local government, they also create linkages between local firms and those outside of the community. The costs of incubators in creating jobs is much lower than with strategies that attempt to attract manufacturing, and can benefit communities which are unable to attract outside firms.

Analysis of incubator and design services by Koven and Lyons⁵⁰ determined that most incubators have been focused on programmatic aspects of incubator models in that they pre-select the combination of services and then wait for the local entrepreneur community to take interest. Incubators should instead be more responsive to the specific needs of the entrepreneur in a given context. Additionally, they should take a practice-based approach instead of a programmatic approach; the incubators should be more client-focused and determine the needs of the client in the area of service and then design programs. This approach is particularly applicable to the Bloomington incubators, as their role in the community will become more important in the transition to more high-tech industries.

Incubators have been shown to benefit the community in many ways. The transformation of an under-utilized property into a center of productivity provides increased opportunity for neighboring business development opportunities. Public-private partnerships, such as the Bloomington Economic Development Corporation, are integral in shaping the collaborative efforts of community and economic development. Involvement of BEDC with the diversification of the local economic base will enhance the locality's image as a center of innovation and entrepreneurship and increase employment opportunities.

⁴⁹ Markley, D. and McNamera, K., "Economic and Fiscal Impacts of a Business Incubator," *Economic Development Quarterly*, 1995, pp.273-278.

⁵⁰ Koven and Lyons, *Economic Development, Strategies for State and Local Development*

INDUSTRY TARGETING

Industry targeting can help bridge the gap between the workforce and developing industries.

The pursuit of a diverse project portfolio to ensure opportunities for all levels of the workforce is of the utmost importance in developing a balanced economy. We recommend that Bloomington consider diversifying its economic development focus beyond information technology and life sciences. An Employment Beta study by the Indiana Business Research Center⁵¹ and a collaborative regional study entitled Unlocking Rural Competitiveness⁵² indicate that the non-targeted industries with the greatest potential are: education and health, financial activities, wholesale trade, energy, agribusiness, food processing and technology, forest and wood products, and defense and security. Ron Walker of the BEDC confirms that these sectors are on the City's development radar, though some have more potential for growth than others. However, agribusiness may experience smaller growth locally compared to its strength in the overall region. BEDC's focus on non-targeted industries includes retention and expansion of existing firms and maintaining overall infrastructure, education, and workforce readiness requirements. Bloomington plans to add more Research and Development and specialty areas into the existing business mix to diversify within the Life Sciences Industry.

Many of the non-target industries have high tech components that give their operation a competitive advantage by growing in this community. Bloomington has a strong workforce, but the skills gap between the workers and the jobs available will need to be carefully monitored to ensure the most effective business development environment.

SITE REUTILIZATION RECOMMENDATIONS

GE should host an issue forum, which can educate the public on site reutilization potential and provide the public with an opportunity to educate GE on the community's opinion about possibilities for the GE site.

⁵¹ The Bloomington Area Economy. Available from: <http://www.incontext.indiana.edu/2007/august/2.html> (Accessed on October 28,2008)

⁵² Dufrene, Uric and Jay White. Indiana Evidence on the Employment Beta: A Simple Tool for Evaluating the Desirability of Targeted Sectors. *Indiana Business Review*, (Fall 2007).

Issue forums provide an excellent opportunity for two-way communication on issues that are salient to a community. The closing of the GE plant is of great importance to many Bloomington area residents, which makes it an important topic for public discussion. Not only will the forum provide GE with information on the needs of the Bloomington community, but it will also offer GE the opportunity to explain the benefits and consequences of various options that might be explored when the site is sold. An issue forum can be tailored to suit the goals of the host, in this case GE. No matter what decision makers choose concerning site reuse, the public is more likely to understand the reasons behind the decision and be more comfortable with it, even if it is not the same as their preference.

Beyond educating the public, an issue forum will be valuable to GE in a number of ways. First, the public may be able to generate viable, but unconventional options for site reutilization that GE may not have explored. This makes it more likely that GE will find a buyer for the site within its timetable. Second, members of the public can use their personal connections to help attract potential buyers.

If GE chooses to hold a forum, there are a number of stakeholders who should be included. First, active local non-profit groups can provide valuable perspective into the community's needs. Second, environmental groups can provide insight into sustainable options. Third, business leaders will be able to offer an outlook of the types of businesses that may be interested in moving to the area. Fourth, city officials can discuss the options from economic structures and legal standpoints that the City has for attracting businesses to the area. Finally, citizens, such as current GE employees, should be included because their lives are affected by any change that is made to the area.

In conclusion, we believe that it is in the best interest of GE and the Bloomington community for GE to host an issue forum based on the seven types of site reutilization discussed above. A forum will increase the likelihood that any site reutilization is completed in a sustainable, equitable, and economically efficient manner that is beneficial to the community and GE. Please see Appendix C for further details on the steps in organizing an issue forum, Bloomington-specific stakeholder suggestions, and tasks for forum organizers.

CONCLUSION

The closing of the GE plant in Bloomington presents some unique problems and opportunities to the local government, non-profit sector, businesses, and citizens of Monroe County and surrounding counties. With 857 people transitioning out of employment from that site, the potential loss to the City and the community may be significant. The issues involved in this project have been numerous and diverse, as are the considerations, solutions, and recommendations presented here. The preceding analysis is intended to present a complete and objective picture of the economic and social aspects of life that will be affected by GE's closing, both now and in the future.

IMPACTS

- Preferential placement will have a large impact on the local and state economy. Based upon an estimated 200 GE employee transfers, there will be an annual loss of \$10,180,000 in wages for the five-county region.
- The impacts to local commerce will be relatively minor, creating a loss of less than 5% of total output and less than 1% of total employment for Monroe County.
- City revenues under the Westside Industries Agreement will remain constant until 2012, taking into account the plant closure. This outcome remains consistent in the event GE decides to sell the property before the completion of the Westside Industries Agreement.
- The GE closure will have no direct impact on city revenue or expenditures or COIT revenue.
- Real property tax revenue will remain constant with no impact on revenue distributions or debt service on the Westside TIF.
- The plant closure will likely cause a dramatic change in personal property tax revenue because the assessed value will drop to zero due to the removal of all GE's personal equipment.
- United Way will lose its third largest contributor to the workforce campaign when GE closes.

NEEDS

- Displaced workers will have individual difficulties that require community-generated proactive solutions.
- Personal financial guidance is needed to help GE employees deal with health care costs, retirement, and construction of and adherence to a new budget.
- In addition to the provision of counseling services, there is a need for strong encouragement of utilization of these services.
- The GE plant closing will create a need to ensure the continuation of social networks in which employees interact.
- Training is needed, not only to develop new skills, but to recognize, market, and utilize the skills that GE employees currently possess.
- GE workers will need assistance in résumé building, interviewing skills, and completing Internet based forms and applications.
- Site reutilization should be an immediate concern to the City and County for economic development and environmental reasons.

RECOMMENDATIONS

- Connectivity and volunteerism options, either through the IBEW or United Way's Days of Caring, will help to maintain social networks for GE employees.
- Personal financial toolkits and advice should be provided through various mechanisms to help adjust to employees' transitioning financial situations.
- A "one-stop shop" of online resources for personal financial, social networking, and psychological needs should be made available.
- An onsite career fair providing resources and advice will help transitioning employees recognize their future needs and the means with which to address them.
- A refined survey detailing the needs and demographic characteristics of the workforce may help guide educational and social service efforts to better address employees' needs.
- A skills bank will allow employers, social service providers, and educators to assess the strengths and needs of the transitioning workforce in a comprehensive manner.
- Development of entrepreneurial talents can help employees start and maintain a new business.
- Readily available business development resources can help displaced employees and the City as a whole.
- Industry targeting can help bridge the gap between the workforce and developing industries.
- GE should host an issue forum, which can educate the public on site reutilization and provide the public the opportunity to express their opinion about possibilities for the GE site.

Our recommendations derive from the needs of employees and the community resulting from the GE plant closing. In a best estimate impact, Monroe County should expect to see 977 workers become unemployed, and the local economy will have a \$251,384,848, or 5% loss of output. Overall fiscal impacts to the County and City governments will be minor, but a dramatic change in personal property tax revenue can be expected. Finally, as GE and its employees are major contributors to local non-profits, such as the United Way, those non-profits will receive less revenue. Since the influx of the unemployed into the economy will create a greater demand on local training resource centers and other social services, non-profits will experience an additional burden.

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APPENDIX A: TECHNICAL APPENDIX

APPENDIX A.1 LOCATION QUOTIENTS

Location quotients (LQs) describe an industry's share of a local economy as compared with that industry's share of a larger reference economy (a.k.a. standard area). LQs are defined as "the percentage of local employment or income accounted for by a given industry, divided by the percentage of a standard area's employment or income in that industry".⁵³ For this analysis, LQs were calculated with 2006 data from the U.S. Bureau of Economic Analysis using the formula:

$$LQ_i = (e_i/e) / (E_i/E)$$

Where, e_i = Regional Employment in Industry i

e = Total Regional Employment

E_i = National Employment in Industry i

E = Total National Employment

Contrary to the dynamic nature of shift share effects, LQs illustrate a static picture of the concentrations of different industries in a community. LQs provide an idea of those industries that might be more concentrated in an area economy than they are in a larger reference economy, in our case the national economy. This gives analysts an initial idea of which industries may be producing more than is needed by the local economy, thus exporting the excess and increasing local revenues. It should be noted that such industries can be over-concentrated and become a liability if further encouraged. Location quotients must be used accordingly along with significant information about the community as a whole and the current industry mix to ensure that location quotient data is being used appropriately.

Table 9: Monroe County Location Quotients

NAICS Code	Industry	Total National Employment (E)	National Employment in Industry I (E_i)	Total Regional Employment (e)	Regional Employment in Industry I (e_i)	Location Quotient ($LQ_i = (e_i/e) / (E_i/E)$)
00	Wage and salary employment	178,332,900	143,249,000	82,912	70,610	1.0602
NA	Proprietor's employment	178,332,900	35,083,900	82,912	12,302	0.7542
00	Farm proprietors employment	178,332,900	2,116,000	82,912	475	0.4828
00	Nonfarm proprietors employment	178,332,900	32,967,900	82,912	11,827	0.7716

⁵³ Barry Rubin, "V622 Seminar in Urban Economic Development: The Economic Base and Location Quotients," Oct. 6, 2008

NAICS Code	Industry	Total National Employment (E)	National Employment in Industry I (Ei)	Total Regional Employment (e)	Regional Employment in Industry I (ei)	Location Quotient (LQ _i =(e _i /e)/(E _i /E))
00	Farm employment	178,332,900	2,868,000	82,912	506	0.3795
NA	Nonfarm employment	178,332,900	175,464,900	82,912	82,406	1.0101
00	Private employment	178,332,900	151,453,900	82,912	61,527	0.8738
72	Accommodation and food services	178,332,900	11,960,200	82,912	6,988	1.2567
22	Utilities	178,332,900	572,700	82,912	318	1.1943
31-33	Manufacturing	178,332,900	14,760,400	82,912	7,472	1.0888
62	Health care and social assistance	178,332,900	17,619,500	82,912	8,496	1.0371
44-45	Retail Trade	178,332,900	19,201,400	82,912	8,886	0.9954
81	Other services, except public administration	178,332,900	10,155,500	82,912	4,688	0.9929
51	Information	178,332,900	3,607,300	82,912	1,430	0.8526
61	Educational services	178,332,900	3,699,300	82,912	1,436	0.8349
71	Arts, entertainment, and recreation	178,332,900	3,617,400	82,912	1,397	0.8306
23	Construction	178,332,900	11,580,000	82,912	4,460	0.8284
56	Administrative and waste services	178,332,900	10,699,900	82,912	4,040	0.8121
53	Real estate and rental and leasing	178,332,900	7,707,000	82,912	2,878	0.8032
54	Professional and technical services	178,332,900	11,701,000	82,912	3,568	0.6559
42	Wholesale trade	178,332,900	6,544,300	82,912	1,993	0.6550
21	Mining	178,332,900	887,200	82,912	212	0.5140
52	Finance and insurance	178,332,900	8,470,300	82,912	1,859	0.4721
00	Military	178,332,900	2,040,000	82,912	396	0.4175
48-49	Transportation and warehousing	178,332,900	5,766,200	82,912	1,009	0.3764
00	Federal, civilian	178,332,900	2,783,000	82,912	434	0.3354
55	Management of companies and enterprises	178,332,900	1,890,700	82,912	269	0.3060
00	Forestry, fishing, related activities, and other	178,332,900	1,013,600	82,912	128	0.2716

The calculations in the Monroe County Employment Location Quotients Table show that Accommodation and Food Services, Utilities, Manufacturing, and Health Care and Social Assistance are strong areas of economic activity for Monroe County, because they have LQs >1.0. Monroe County employs more than enough people to meet local demands for these goods and services. Those additional employees are part of what is known as “export employment” and are an important part of local revenues. On the other hand, Forestry, Fishing, Related Activities, and Other; Management of Companies and Enterprises; Transportation and Warehousing; Finance and Insurance are the weaker areas of economic activity with LQs <1.0. This would indicate that Monroe County does not employ

enough people in these industries to meet the average local market demand, and it is likely that these goods and services are imported from somewhere outside of Monroe County. Industries with LQs <1.0 might be good targets for closing leakages in the local economy.

APPENDIX A.2: SHIFT-SHARE ANALYSIS

In order to gain a better understanding of the economic environment in Monroe County and the impact of GE's departure, a shift-share analysis was conducted. This technique helps to determine each industry's contribution to growth in the area, and give insight into which industries might be particularly suited to this area's resources. This information can give us an idea of the impact of the GE closure in terms of the relative importance of the industries most affected to the overall economic health of the area. This data can also inform decisions about workforce development, business attraction and possibly cluster development.

Shift-share analysis is based upon the assumption that a regional industry's total growth is attributed to three components: national economic growth, industrial composition of the region, and the region's competitive advantage.⁵⁴ These components are also known as the national growth effect, industry mix effect, and competitive effect, respectively.⁵⁵

Shift-Share analyses can be conducted using industry output, earnings, or employment. For this analysis we used employment data from the U.S. Bureau of Economic Analysis (BEA) for industry sectors defined by the North American Industry Classification System (NAICS) because it was available for more industry sectors than the other possible parameters.

NATIONAL GROWTH EFFECT

The national growth effect is the proportion of a regional industry's employment growth that is due to overall national economic growth. It is calculated by multiplying the national employment growth rate over the given time period by the regional industry employment. The time period used in our analysis was $t = 2006$ and $t-n = 2001$. National employment growth can be calculated using the formula:

$$\frac{E_{t,n} - E_t}{E_t} \quad \text{Where } E_{t,n} = \text{National Employment in Period } t$$

$$\text{and } E_t = \text{National Employment in Period } (t - n)$$

⁵⁴ John Blair, "Regional Growth and Development: Advanced Perspectives," *op cit*, Ch. 6, 186.

⁵⁵ Barry Rubin, "SPEA V622 Seminar in Urban Economic Development: Shift-Share Analysis," Oct. 8, 2008.

INDUSTRY MIX EFFECT

The industry mix effect is the “regional industry’s expected growth rate due to the difference between the industry’s national growth rate and the overall, average national growth rate.”⁵⁶ A positive industry mix effect indicates a fast growth industry, and a negative value indicates a slow growth industry.⁵⁷ The industry mix effect also provides an estimate of the overall contribution of a particular industry’s growth to a community’s overall economic growth. The industry mix effect is calculated using the following formula:

$$\frac{\Delta R_{i,t} - \Delta R_{i,t-n}}{R_{i,t-n}} \times \frac{\Delta R_{i,t} - \Delta R_{i,t-n}}{\Delta R_{i,t} - \Delta R_{i,t-n}}$$

Where R = Regional Employment in Industry i

and ΔR = change in employment between period t and period $(t - n)$

Our analysis shows that the following sectors are fast growth industries:

- Real estate and rental and leasing
- Health care and social assistance
- Construction
- Accommodation and food services
- Administrative and waste services
- Professional and technical services
- Education Services
- Arts, entertainment, and recreation
- Finance and Insurance

COMPETITIVE EFFECT

⁵⁶ Barry Rubin, “SPEA V622 Seminar in Urban Economic Development: Shift-Share Analysis,” Oct. 8, 2008.

⁵⁷ Ibid.

The competitive effect is “the growth in the regional industry which would result from the difference between the industry’s regional growth rate and the industry’s national growth rate.”⁵⁸ A positive competitive effect value implies that the industry’s location in the region gives the industry a competitive advantage over the same industry located in most other regions of the nation.⁵⁹ The industry mix effect is calculated using the following formula:

$$\Delta \text{Regional Growth Rate} - \Delta \text{National Growth Rate} \times \text{Regional Growth Rate}$$

Our analysis shows that the following sectors have a competitive advantage in the region:

- Educational services
- Manufacturing
- Administrative and waste services
- Information
- Finance and insurance
- Arts, entertainment and recreation
- Wholesale trade

SHIFT-SHARE DATA

Table 10: Shift-Share Sorted by Industry Mix Effect

NAICS Code	Industry i	National Growth Effect	Total Shift (SiR)	Proportionality Shift or Industry Mix Effect (PiR)	Differential Shift or Competitive Effect (Dir)	Total Regional Industry Growth = (National Growth Effect + Industry Mix Effect + Competitive Effect)
0	Nonfarm proprietors employment	638.91	1760.09	1888.81	-128.73	2399
NA	Proprietor's employment	672.93	1699.07	1758.22	-59.16	2372
53	Real estate and rental and leasing	164.47	286.53	777.93	-491.40	451
62	Health care and social assistance	529.74	149.26	475.76	-326.50	679
0	Private employment	3914.67	-153.67	465.71	-619.38	3761
23	Construction	264.09	298.91	421.89	-122.98	563
72	Accommodation and food services	442.93	9.07	242.36	-233.29	452

⁵⁸ Ibid.

⁵⁹ Ibid.

NAICS Code	Industry i	National Growth Effect	Total Shift (SiR)	Proportionality Shift or Industry Mix Effect (PiR)	Differential Shift or Competitive Effect (Dir)	Total Regional Industry Growth = (National Growth Effect + Industry Mix Effect + Competitive Effect)
81	Other services, except public administration	294.18	52.82	236.31	-183.49	347
NA	Nonfarm employment	5245.63	-245.63	186.53	-432.15	5000
56	Administrative and waste services	231.70	389.30	151.71	237.59	621
54	Professional and technical services	233.73	-114.73	133.22	-247.95	119
61	Educational services	56.18	550.82	117.57	433.25	607
71	Arts, entertainment, and recreation	82.61	95.39	58.08	37.31	178
52	Finance and insurance	109.99	126.01	20.58	105.43	236
21	Mining	18.03	-72.03	6.82	-78.85	-54
0	Total employment	5281.88	-310.88	0.00	-310.88	4971
55	Management of companies and enterprises	17.21	-2.21	-1.31	-0.90	15
0	Forestry, fishing, related activities, and other	8.61	-7.61	-9.71	2.11	1
48-49	Transportation and warehousing	65.12	-17.12	-13.83	-3.30	48
0	Federal, civilian	28.06	-8.06	-19.71	11.65	20
22	Utilities	19.45	11.55	-40.83	52.38	31
0	Military	29.21	-64.21	-41.32	-22.89	-35
42	Wholesale trade	127.95	-22.95	-46.42	23.47	105
0	Farm proprietors employment	34.02	-61.02	-50.09	-10.92	-27
0	Farm employment	36.26	-65.26	-69.17	3.91	-29
51	Information	98.94	-128.94	-259.75	130.81	-30
44-45	Retail Trade	599.61	-561.61	-278.42	-283.18	38
0	State and local	1273.69	-19.69	-418.58	398.89	1254
0	Government and government enterprises	1330.96	-91.96	-626.87	534.91	1239
31-33	Manufacturing	550.14	-1196.14	-1617.37	421.24	-646
0	Wage and salary employment	4608.95	-2009.95	-2444.64	434.70	2599

Table 11: Shift-Share Sorted by Competitive Effect

NAICS Code	Industry i	National Growth Effect	Total Shift (SiR)	Proportionality Shift or Industry Mix Effect (PiR)	Differential Shift or Competitive Effect (Dir)	Total Regional Industry Growth = (National Growth Effect + Industry Mix Effect + Competitive Effect)
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0	Government and government enterprises	1330.957383	-	-626.8659246	534.9085418	1239
0	Wage and salary employment	4608.948196	-	-2444.643408	434.6952122	2599
61	Educational services	56.17941295	550.8205871	117.5736525	433.2469346	607
31-33	Manufacturing	550.1380872	-	-1617.373303	421.2352159	-646
0	State and local	1273.693687	-	-418.584168	398.8904811	1254
56	Administrative and waste services	231.6977236	389.3022764	151.7093131	237.5929633	621
51	Information	98.94082377	-	-259.7504345	130.8096107	-30
52	Finance and insurance	109.9869568	126.0130432	20.58425853	105.4287846	236
22	Utilities	19.44932632	11.55067368	-40.83054804	52.38122172	31
71	Arts, entertainment, and recreation	82.60881108	95.39118892	58.08117689	37.31001203	178
42	Wholesale trade	127.945394	-	-46.41716372	23.47176969	105
0	Federal, civilian	28.05582263	-	-19.70904844	11.65322581	20
0	Farm employment	36.25571282	-	-69.16801649	3.912303665	-29
0	Forestry, fishing, related activities, and other	8.606496314	-	-9.711924187	2.105427873	1
55	Management of companies and enterprises	17.21299263	-	-1.31033428	-0.902658349	15
48-49	Transportation and warehousing	65.1247477	-17.1247477	-13.82693988	-3.297807819	48
0	Farm proprietors employment	34.01937913	-	-50.09440201	-10.92497713	-27
0	Military	29.20787332	-	-41.3226899	-22.88518342	-35
NA	Proprietor's employment	672.933137	1699.066863	1758.223383	-59.15651955	2372
21	Mining	18.02620488	-	6.823191227	-78.84939611	-54
23	Construction	264.0906782	298.9093218	421.8924532	-122.9831314	563
0	Nonfarm proprietors employment	638.9137579	1760.086242	1888.811602	-128.7253603	2399
81	Other services, except public administration	294.1795315	52.8204685	236.3093188	-183.4888503	347
72	Accommodation and food services	442.9296056	9.070394402	242.3565785	-233.2861841	452
54	Professional and technical services	233.7307542	-	133.2216087	-247.9523629	119
44-45	Retail Trade	599.6084991	-	-278.4239216	-283.1845775	38
0	Total employment	5281.881333	-	0	-310.8813326	4971
62	Health care and social assistance	529.7400133	149.2599867	475.7635098	-326.5035231	679
NA	Nonfarm employment	5245.62562	-	186.5284361	-432.1540559	5000
53	Real estate and rental and leasing	164.4721776	286.5278224	777.9281538	-491.4003314	451

0	Private employment	3914.668237	-153.668237	465.7075102	-619.3757472	3761
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APPENDIX A.3: LABOR DATA AND REFINEMENT

The data and Economic Impact Analysis completed by the Bloomington Economic Development Corporation incorporated the assumption that the full GE layoff was subtracted from the workforce. However, GE representatives have indicated that this is an oversimplification. In fact, a majority of employees are eligible for some form of retirement or compensation benefit. First, retiring may remove an employee from the workforce, but the economic impact of retirement is less than that of dismissal. A retiree will continue to receive income in the form of pension payments and may still consume at normal levels, whereas a displaced employee will likely be forced to reduce consumption habits. Further, the fact that many workers were at or near retirement age suggests that the impact may be less than if they were younger. As long as there are younger, productive workers entering the economy, the layoff impact can be minimized. Finally, most of the non-retiring workers may receive a compensatory package, which can supplement any potential consumption loss until they can re-enter the workforce. Thus, our economic impact analysis had to account for this refinement of labor data. The actual worker displacement is smaller than the announced figure, and retiring workers and workers receiving compensation will have smaller economic impacts than others due to mitigation of wage loss.

The revised data that we will use in our analysis is listed below. We began first with the baseline used by the BEDC, 800 unemployed at a personal income loss of \$45,000,000, which averages \$56,250 per employee. Using GE survey information, we aggregated the employees into three groups based on their future intentions, such as attending trade school or seeking self-employment. The groups are “layoff,” where the worker seems to desire remaining in the workforce; “unknown,” where we could not interpret with certainty the worker’s preference; and “non-layoff,” where the worker indicated a desire to retire, seek self-employment or pursue a Special Early Retirement Option (SERO). For the latter, we find that the worker may not seek normal re-entry into the workforce and therefore their unemployment is not equivalent to a productive worker being laid off. The number in each group was 456, 250 and 108, respectively, which sums to 814. We then conducted a sensitivity analyses from the layoff population, the layoff population and half of the unknown group, and the layoff and unknown groups, 456, 581 and 706 workers, respectively.

Table 12: Workers' Intentions

Layoff		Unknown		Non-Layoff	
Pursue Degree	152	Other	98	Self-Employment	62
Technical School	109	No Assistance	152	Retire	39
Trade School	111			Wants SERO	7
Pref. Hire	84				
TOTAL	456		250		108
Source: GE Workers' Survey					

Secondly, we have to revise the personal income data to account for severance benefits. Severance is awarded to workers with a minimum of fifteen years of service and provides two weeks of pay for each year of service. There were 786 workers eligible for severance, indicating that 28 workers (814 – 786) were ineligible for benefits. To calculate severance, we first identified a baseline personal income for each unemployed figure used. In this case, the baseline is the number of unemployed multiplied by \$56,250. For each level, we calculated three severances for sensitivity.

Table 13: Revised Input Data

	Unemployed	PI 1	PI 2	PI 3
Layoff	456	\$9,852,000	\$5,188,000	\$2,538,000
Layoff + 1/2 Unknown	581	\$10,133,250	\$5,469,250	\$2,819,250
Layoff + Unknown	706	\$10,414,500	\$5,750,500	\$3,100,500

Assumptions:

- Non-eligible workers receive no severance
- All workers eligible for severance only, 265, are in the unemployed pool
 - They are the youngest and have served between 15 and 25 years
 - They make a minimum of \$22/hour (GE’s starting wage)
- The remainder of the unemployed is eligible for more than severance, but as they are seeking re-entry, they will only take severance
 - They have served more than 25 years (since we do not know the full extent of their employment, we do not calculate severance for more than 25 years)
 - They make a minimum of \$27/hour: $(\$56,250/\text{yr}) \times (1/40 \text{ hrs/wk}) \times (1/52 \text{ wks/yr})$
- Severance is found by $(\text{No\# of workers}) \times (\text{Wage } \$/\text{hr}) \times (40 \text{ hrs/wk}) \times (2 \text{ wks/yr}) \times (\text{Years served})$
 - Severance only workers for purpose of sensitivity analysis received and served:
 - \$22/hr and 15 years
 - \$22/hr and 25 years
 - \$27/hr and 25 years
 - Severance + workers received \$27/hr and served 25 years

From these assumptions, we calculated nine severance “packages,” three per unemployment assumption. We subtract the severance from the baseline personal income loss to derive the revised personal income figure.

APPENDIX A.4: INPUT-OUTPUT ANALYSIS

We performed an economic impact analysis for the Monroe County area to estimate the economic impacts of the GE plant closing. The impact software utilized for this economic impact analysis is called Regional Project Assessment Systems (RPAS), created by Applied Economics, an economic consulting firm based in Phoenix, Arizona. The Indy Partnership—a regional economic development corporation—

purchased RPAS to help assess the economic and revenue impacts of new business development in the region. The Economic Impact Group gained access to the RPAS software through the Bloomington Economic Development Corporation (BEDC), which works closely with the Indy Partnership.

The impact model utilized for this economic impact analysis was customized for the economic development use of the Indy Partnership, which consists of Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Monroe, Morgan, Shelby, and Tippecanoe Counties, plus the Greater Indianapolis region. The impact model consists of two main modules: economic impact and revenue impact, and it approximates marginal changes in relevant variables utilizing current regional conditions.⁶⁰ The economic impact module of RPAS is based on input-output matrices from the Minnesota IMPLAN Group, Inc., and estimates direct, supplier, and consumer impacts of a business closing or locating in a specified region, depending on the economic base and multiplier effects within that region. IMPLAN (Impact Analysis for Planning) is an econometric modeling system that uses data from the U.S. Bureau of Economic Analysis along with other data to formulate models of demand and supply flow relationships between industries, firms, and consumers in order to estimate impacts caused by changes in economic activities in a region.⁶¹

The economic impact module of RPAS “estimates the direct and indirect impacts of employment, output, personal income, and supported population for the selected county.”⁶² For this analysis, the direct impact predicts the direct effects to Monroe County given the number of GE jobs lost and the estimated GE employee income lost. The supplier impacts estimate the number of jobs lost, income lost, and decreased output of suppliers that directly supply goods to GE. Consumer impacts estimate the number of jobs lost, income lost, and decreased output of industries that directly and indirectly provide services to GE’s employees and families. Consumer impacts include locally purchased intermediate products as well as end-use consumer products. Thus, the total economic impact analysis provides information regarding both direct and indirect impacts to the community and includes a “breakdown of output and employment by industry sector” in the form of disaggregated impact reports.⁶³ The aggregate and disaggregate impact reports for the impact scenarios discussed in the body of this report are included at the end of this appendix.

In addition to the impact to employment, personal income and output resulting from GE leaving the region, the RPAS economic impact model estimates direct and indirect impacts to the populations

⁶⁰ Applied Economics, “User’s Guide and Technical Documentation,” *Regional Project Assessment System: Economic and Revenue Impact Software Customized for Indy Partnership*, p. 1.

⁶¹ <http://www.massachusetts.edu/econimpact/methodology.html>, November 29, 2008.

⁶² Applied Economics, “User’s Guide and Technical Documentation,” *Regional Project Assessment System: Economic and Revenue Impact Software Customized for Indy Partnership*, p. 20.

⁶³ Ibid.

supported by GE's presence in the region. Specifically, the model estimates changes to the Supported Population, Grade School Population, High School Population, and Supported Households for the direct, supplier, and consumer impact categories. The model uses 2000 Census data for the State of Indiana to calculate demographic rates as follows:

Supported Population

= (the number of workers/workers per household) x (population per household) x (the percentage of workers in the County)

Grade/High School Population

= (the number of workers/workers per household) x (the percentage of workers in the County) x (the number of grade/high school students per household)

Supported Households

= (the number of workers/workers per household) x (the percentage of workers in the County)

Household spending estimates are also incorporated into the economic impact model. Total household income is calculated from the average personal income per employee and the number of workers per household. Utilizing data from the Census Bureau Consumer Expenditure Survey for 2004, "a percentage is applied to personal income indicating the relationship between gross income and household expenditures at the implied household income level."⁶⁴

Table 14: Supplier Impacts

		Severance Estimate 1	Severance Estimate 2	Severance Estimate 3
Layoff (456 unemployed)	Total Employment Loss	115	60	30
	Total Personal Income Loss	\$4,956,615.00	\$2,610,121.00	\$1,276,887.00
	Total Output Loss	\$1,316,685.00	\$6,933,492.00	\$3,391,905.00
Layoff + 1/2 Unknown (581 unemployed)	Total Employment Loss	118	64	33
	Total Personal Income Loss	\$5,098,114.00	\$2,751,620.00	\$1,418,386.00
	Total Output Loss	\$13,542,561.00	\$7,309,368.00	\$3,767,781.00
Layoff + Unknown (706 unemployed)	Total Employment Loss	121	67	36
	Total Personal Income Loss	\$5,239,613.00	\$2,893,119.00	\$1,559,885.00
	Total Output Loss	\$13,918,437.00	\$7,685,244.00	\$4,143,657.00

⁶⁴ Applied Economics, *op cit.*, p. 21

Table 15: Consumer Impacts

		Severance Estimate 1	Severance Estimate 2	Severance Estimate 3
Layoff (456 unemployed)	Total Employment Loss	100	53	26
	Total Personal Income Loss	\$2,773,645.00	\$1,460,583.00	\$714,526.00
	Total Output Loss	\$8,093,294.00	\$4,261,877.00	\$2,084,935.00
Layoff + 1/2 Unknown (581 unemployed)	Total Employment Loss	103	56	29
	Total Personal Income Loss	\$2,852,825.00	\$1,539,764.00	\$793,707.00
	Total Output Loss	\$8,324,337.00	\$4,492,920.00	\$2,315,978.00
Layoff + Unknown (706 unemployed)	Total Employment Loss	106	58	32
	Total Personal Income Loss	\$2,932,006.00	\$1,618,945.00	\$872,887.00
	Total Output Loss	\$8,555,381.00	\$4,723,963.00	\$2,547,022.00

Table 16: Direct Impacts

		Severance Estimate 1	Severance Estimate 2	Severance Estimate 3
Layoff (456 unemployed)	Direct Employment Loss	456	456	456
	Direct Personal Income Loss	\$9,852,000.00	\$5,188,000.00	\$2,538,000.00
	Direct Output Loss	\$52,452,609.00	\$27,621,207.00	\$13,512,456.00
Layoff + 1/2 Unknown (581 unemployed)	Direct Employment Loss	581	581	581
	Direct Personal Income Loss	\$10,133,250.00	\$5,469,250.00	\$2,819,250.00
	Direct Output Loss	\$53,950,000.00	\$29,118,598.00	\$15,009,847.00
Layoff + Unknown (706 unemployed)	Direct Employment Loss	706	706	706
	Direct Personal Income Loss	\$10,414,500.00	\$5,750,500.00	\$3,100,500.00
	Direct Output Loss	\$55,447,391.00	\$30,615,989.00	\$16,507,238.00

Table 17: Total Impacts

		Severance Estimate 1	Severance Estimate 2	Severance Estimate 3
Layoff (456 unemployed)	Total Employment Loss	671	569	512
	Total Personal Income Loss	\$17,582,259.00	\$9,258,705.00	\$4,529,413.00
	Total Output Loss	\$73,712,588.00	\$38,816,676.00	\$18,989,296.00
Layoff + 1/2 Unknown (581 unemployed)	Total Employment Loss	802	701	643
	Total Personal Income Loss	\$18,084,189.00	\$9,760,635.00	\$5,031,342.00
	Total Output Loss	\$75,816,898.00	\$40,920,886.00	\$21,093,607.00
Layoff + Unknown (706 unemployed)	Total Employment Loss	933	831	774
	Total Personal Income Loss	\$18,586,118.00	\$10,262,564.00	\$5,533,272.00
	Total Output Loss	\$77,921,208.00	\$43,025,196.00	\$23,197,917.00